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ORIGINAL LECTURES.

SOME DISEASES OF THE FEMALE ORGANS OF GENERATION, CHARACTERIZED BY NEW GROWTHS.

A Clinical Lecture, delivered at the Long Island College Hospital, Brooklyn, N. Y.

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(Reported by EDWARD DEVELIN, M.D.)

GENTLEMEN: To-day I call your attention more especially to *disease* of the female organs of generation, characterized by those neoplasms which often result so seriously to the patient, frequently terminating in death, but more generally in chronic disease and inability to continue their normal functions. I desire to call your attention to these diseases and conditions, that you may the more readily recognize them in the incipient stage, and apply such means for their relief as may result most satisfactorily both to the patient and to you as medical men.

OVARIAN TUMOR.

This woman came to me ten months ago; she then presented the same outlines as she does now, but with this difference, that at that time her general appearance was much better than it is now. She was then in good flesh, with rosy cheeks, and was not emaciated as she now is. You observe here the enormous distention of the abdomen; but, apart from this, at that time she had all the appearances of being a strong, vigorous woman.

At that time we made a diagnosis, and relieved her of this enormous distention of the abdomen, removing seventeen quarts of fluid, of a chocolate consistency, from this abdominal tumor with which she is afflicted. I desire you to specially notice this patient, as she gives the physiognomy of her disease, and which is described in our books as the facial expression of ovarian disease.

After the fluid was withdrawn, she was quite comfortable, and returned to her home, until four months ago, when she again presented herself in the same condition as before. The tumor was again aspirated, and somewhere in the neighborhood of the same quantity of fluid removed as previously. She was then allowed to return home, and to-day returns with this enormously distended abdomen precisely the same as upon the two previous occasions.

This patient cannot lie down without great distress, and you observe, as she is now sitting in an ordinary chair, that the tumor is so immense that it projects beyond the knees. We will, however, place her in the recumbent position, and you now notice that there is no adipose tissue upon the abdominal walls; we also find flatness at all points of this distended abdomen; it is also irregular in its outline; I cannot flatten or displace this abdomen by pressure while she is lying here as I could if it were a free fluid, simply because it is fluid in a cyst, distended until its walls are tense. There is no difficulty here in obtaining diametric fluctuation. I tap lightly upon this left side; there is no difficulty in detecting the wave upon the opposite side; so we have it with peripheral percussion.

The point is to make out if this fluid is encysted; this we can easily accomplish. Now I get clear peripheral fluctuation all around except upon the left side, and I find at this point that it is semi-solid and irregular. On making a vaginal examination, I find also in the cul-de-sac of Douglas a solid mass which belongs to this growth within the abdominal cavity. We notice also upon the abdomen that the vessels, insisting upon their privileges, have made deep furrows in the abdominal walls, this enlargement of the veins being entirely owing to the pressure brought to bear upon them. As I pass my hand lower down, I also come to a solid mass; and here you will observe that the distance from the symphyses pubes to the umbilicus is much shorter than normal. Now the question probably which occurs to you is: If I made my diagnosis of this case a year ago, why did I not remove this tumor? That is the only proper treatment for ovarian tumor. I will state that I did not deem it expedient to remove it for what appeared to me to be good reasons, although at that time she was in much better condition than she is now. I do not understand how such patients can carry these enormous tumors with the facility that they do. Keith removed a tumor weighing one hundred and twelve pounds, when the entire weight of the woman previous to its removal was only one hundred and eighty-seven pounds, so that in his case he literally removed the woman from the tumor, as his friends laughingly remarked. In this case before you, however, it was not the size of the tumor of which I was afraid; you notice that the umbilicus is low down, and I presumed from that that the solid portion of the tumor which was in the pelvis had formed adhesions to the bladder, uterus, and abdominal walls, showing that these parts would not yield, and that those above had been overcome by these adhesions and dragged down. I obtained further evidence that there were adhesions with the bladder and uterus, because, in passing the sound into these organs, I found that they were immovable. This told me it would be extremely difficult to remove this tumor, even if it were possible. More than that, I found that this solid mass, high up on the left side, was adherent probably to the stomach and diaphragm. As I made pressure, the fluid could be displaced downwards, but at this point the solid mass was immovable.

Now if there are no adhesions in these tumors, you can slide them up or down in the abdominal cavity; but in this case I could not do so. I therefore thought it best to first aspirate, and by this means determine the relation of these adhesions. The fluid was accordingly withdrawn, and we then found a solid mass adherent to the diaphragm upon this left side, and, when the abdominal walls were relaxed, I could distinctly feel this solid mass as being part of the cyst. I thought at first that it might be an enlarged spleen which was pushed forward by the tumor, but I found it was a part of the tumor itself. This growth, then, was adherent to the diaphragm, and also to all the pelvic organs.

What the solid portion in the pelvis is I do not positively know; it may be fibrous, or composed of little cysts, and above, I presume, we have the same condition of things. It does not present the characteristics of the spleen, liver, or stomach, or anything that might be looked for in that part of the abdomen, and from this I judge it to be a mass of small cysts. Had this growth not been adherent so extensively, I could

have removed it; but with these adhesions I had not the courage to operate, as I was almost sure I should fail. Not necessarily, however, for we have cases on record in which the tumor has been adherent to the liver and stomach, and yet the patients made a good recovery after the operation. There are some of Keith's cases (and if I did not know the man so well, I should almost doubt it) which have been recorded by others in which such operations have been eminently successful. But then he is the surgeon of surgeons in ovariotomy, and can do more in less time than any other man; his knowledge and power to deal with these cases are wonderful. He might perhaps have operated in this case, but I would prefer not to. I told the patient how she was situated, and she thought if I could relieve her for a few months more, to look after her family, she would prefer to do so than run the risk of an operation; she was therefore aspirated as desired.

But even in mild cases this tapping involves danger, so that I am sometimes unwilling to do it, as patients have died from it. They do not die so often now, because the aspirator can be used with less danger than the original method of tapping, the fluid being less liable to escape into the cavity of the peritoneum as the operation is now performed. I believe in this case the cyst-wall also was adherent to the abdominal walls. There is, however, always danger of exciting peritonitis, and we only tap where the diagnosis is very doubtful.

While the diagnosis was not doubtful here, it was very doubtful as regards the extent and character of the adhesions, and I had no other method of satisfying myself but by tapping in order to discover these adhesions high up on the side and also in the pelvis. In this case, the operation was very satisfactory; but it must be remembered that every time you tap your patient, you render the possibility of operating upon them by ovariotomy more difficult. Lawson Tait has brought this out very well indeed. His theory is that you exhaust the patient by repeated tappings; you take away this enormous quantity of fluid, which is reproduced at the expense of the normal constituents of the blood; and hence when you perform ovariotomy your patient is in no condition to recover, even if you escape peritonitis. They die, he says, of asthenia.

In this case, we can give this woman relief for a few months more of her remaining life, but that is all. Had we chanced to see her in the earlier stages of her difficulty, we might have been able to save her; but as it now is, this tumor is simply crowding her out of existence. The question may then arise, Is it not better to operate in cases of this kind, with hopes of a permanent cure, than to allow them to live a few months longer, with the knowledge that death must inevitably result from their disease? This is an extremely difficult question to answer, as the patient may not be willing to run the risk of an operation, even if you are to perform one.

SUBPERITONEAL FIBROID OF UTERUS.

This patient is thirty-seven years of age, and has been married seventeen years. Ten years ago she came to me in the dispensary. I then proposed an examination, when she suddenly fainted, and on reviving she stated that she often had these attacks. She has had no children. She has had three miscarriages, one at five months, one at three months, and one at three and a half months; the last was ten years ago, after which time she came under my care. A few points in her history which I remember now are these: one being pelvic peritonitis, which she had some time ago, the result of exposure; at another time she threatened to develop tuberculosis—threatened, I say, because she had a circumscribed bronchitis at the apex of the left lung, and I believe that is considered rather a forerunner of tuberculous deposit, and with this a peculiar disposition to miscarriage, with occasional attacks of menorrhagia, with pelvic tenesmus and backache, she has lived a half-sick, half-well kind of life. She has menstruated irregularly, and quite often profusely, at one time having menorrhagia for two months. We might say of this patient that she has had something of a slight menorrhagia, at times pronounced, at other times not marked, but on the whole a disposition to hemorrhage; that she has had an attack of pelvic peritonitis, that she has all along had a great deal of pelvic pain, so that she has never been equal to ordinary locomotion; walking, standing, or sitting, for a long time past, has given her a good deal of trouble.

Now we will endeavor to ascertain what the pathological conditions are which give rise to this history. Her miscarriages have been involuntary. We sometimes find patients who have a history of a number of miscarriages; but upon investigation we find that they have been caused by the patient herself or some companion in iniquity; but in this case it was due to the organization. I will give you the physical signs in a moment. I might say now that I find the uterus high up, the os far back in the left side, so that I can reach very little of the uterus in the pelvic cavity. Now here we have an abdomen that is symmetrically developed apparently, a little fuller perhaps on the left side; this abdomen presents nothing unusual to a patient who has much adipose tissue, but in this case it is out of proportion to the rest of the body. An abdomen of this size, at thirty or forty years of age, is nothing if it corresponds with the rest of the body. In this case it does not. We will now see how much of this is adipose tissue; to decide this we raise up a fold of the abdominal wall between our hands, and measure the thickness of the fold we thus retain. In this case it is four inches; now divide this by two, and it gives us two inches, which is the thickness of the adipose tissue upon the abdominal walls of our patient.

Now I find in the region below the umbilicus an area of dulness or flatness, but above this we get the tympanitic resonance. Now besides this amount of adipose tissue, there is something else here which gives this flatness on percussion, and as I follow this around, and compress the adipose tissue, I come to a solid mass. In this region here I get flatness on percussion and a mass solid to the touch. Let us see if it is fluid; perhaps it is not solid. I find here not the slightest diametrical fluctuation; I get no wave. Let me try if I can get it with peripheral percussion, taking a small section; I do not. Let us see if I get displacement; I can displace the whole mass. Now if it was fluid, I would displace it upward or downward by pressure; but this I cannot do. I get motion of this entire mass to a very limited extent; so I have all the physical signs of solidity, or a solid tumor. So much is adipose tissue (grasping the adipose tissue in his hand), the rest is solid material. This gives you an idea of the size of this neoplasm.

Now from these physical signs I am well satisfied that this is a solid mass. There is one source of error, not marked in this case, however, and that is the apparent fluctuation of adipose tissue. This differs according to the character of the tissue; it may be almost solid, or of a jelly-like consistency, depending upon the proper amount of the elements which make up this adipose tissue. Sometimes it is so soft and yielding that it fluctuates; this puzzles us sometimes. Just bear in mind the physical signs here, and I think you will be perfectly safe in saying that this is solid material, or, if not solid, a semi-solid material, within a very dense cyst-wall. We occasionally have a thick cyst-

wall containing a gelatinous material, so that the whole mass gives us all the signs of solidity; it does not fluctuate, does not yield to pressure; these, however, are very rare cases. Even in the ovarian cysts, where the contents are gelatinous and thick as glue, you will get this sense of fluctuation. In the fibro-cyst we often get that motion which simulates fluctuation so clearly that we are inclined to diagnosticate fluid when it is semi-solid. Apart from these conditions, I know of nothing in the list of abdominal tumors that would be likely to deceive us.

There is, however, one other condition that would give us some of the physical signs that we have here. When I find a symmetrically developed abdomen, the question arises whether we have a pregnant uterus; for the physical signs obtained by the vaginal touch may leave us in doubt about that. The uterus in this case has entirely escaped from the pelvis, except a small portion. This, you know, is the condition in the later months of pregnancy, and the question arises whether we have a pregnant uterus, or an enlargement of the organ from some neoplasm which produces the same physical signs. Here, in this case, we find an inelasticity about this which rather argues against gestation; almost always the pregnant uterus will yield to pressure, and sometimes after manipulating for a time, the walls of the uterus will contract; then it simulates the tense cyst or solid tumor, so that you get neither elasticity nor fluctuation. This alone, however, would not be sufficient to exclude pregnancy. The character of the cervix in this case argues against it, as it is very small; it is not enlarged and soft, like the pregnant cervix. Again, this woman has none of the signs of fœtal motion or fœtal heart-sounds, nor changes of the mammary glands. Dr. Stewart has excluded this, and I will not dwell upon this peculiarity. Then we come to the next question, What is this tumor? It is evidently connected with the uterus, as the uterus is displaced, and the cervix moves when we move the mass in the abdomen. It looks as though the tumor was on one side, and the uterus on the other, so that we have a right lateral version of the uterus, the cervix pointing a little towards the left side. When you place her on the left side, the tumor comes nearer to the normal axis of the uterus; that is a very good point in evidence of this right lateral version of the organ—fundus to the right, cervix to the left.

Now, I have but very little doubt in my mind that this is a large fibroid growth projecting from the left wall of the uterus; I believe that, because six or eight years ago I was able to make out that she had a fibroid growth, and her subsequent history agrees with the present physical signs. It has increased enormously since then, as it now extends beyond the umbilicus.

I have mentioned to you before, that of these fibroids of the uterus we have three varieties; not that the pathology of the growth changes at all: they are all alike in their hystological composition, but differ in their location. It is important to bear in mind the varieties in regard to location, as each one behaves differently. I represent upon the blackboard the uterus, composed of three sections or layers of tissue, the three colored chalks representing these as follows: from within outwards, first, the mucous membrane of the uterus, next its muscular tissue, and finally its peritoneal covering; we find the fibroid growth in this case just beneath the peritoneum; this, then, is a subperitoneal fibroid of the uterus. When the growth occurs beneath the mucous membrane, it is called submucous. The third variety is a growth within the walls of the uterus, and is called an interstitial fibroid of the uterus, because it grows in the muscular walls of the organ itself.

Here, then, we have the three varieties according to location. Now, as I have before remarked, each one behaves differently. The first one, the submucous, increases the size of the cavity of the uterus; the menstruation then becomes excessive, because you have more surface to menstruate and an increased vascularity, hence we have no affection short of malignant disease which gives the same amount of hemorrhage as this. Some authors have called this the bleeding disease of the uterus, it being so excessive sometimes that the life of the patient is threatened from loss of blood. This patient has sometimes had metrorrhagia, but it has not been excessive more than once in her whole sickness, she then having two months of constant though slight oozing.

Now, in the second or subperitoneal variety, the growth being away from the cavity of the uterus does not give rise to this hemorrhage to the same extent; the interstitial variety then holds a position between the two in regard to hemorrhage. There is much difference, you observe, between the history of each. Each history, then, aids us in making our diagnosis, and hence you cannot fail to appreciate the importance of the history in these cases. In a case like this, the menorrhagia has been so slight that it is almost certain the tumor is not submucous. There are physical signs which enable us to diagnosticate the location of the tumor. Sometimes these subperitoneal fibroids become pedunculated, and we can move them around within the peritoneal cavity, and demonstrate their attachment to the uterus.

Again, if the tumor projects from the outer surface of the uterus as a distinct nodule, it is a sign of its being subperitoneal. In using the uterine probe, if we find that the cavity of the uterus is straight, but largely on one side of the tumor, it proves that the tumor is subperitoneal or interstitial, with a marked tendency to extend outwards. On the other hand, if the canal of the uterus is deflected in a marked degree, the fact points to the tumor being submucous. If the tumor projects into the cavity of the uterus, so that the sound can be passed partially around, it is clear evidence that the tumor is submucous, and tending to become intra-uterine and pedunculated.

The modes of treating these fibroids may be briefly stated as follows: By ergot, electrolysis, enucleation, removal of the ovaries, and finally removal of the tumor, uterus, ovaries, and Fallopian tubes. Ergot gives its best results in the submucous varieties. Enucleation is employed only in the submucous tumors, when they are well within the grasp of the uterine walls, and low enough down to be easily reached. Removal of the ovaries is called for in cases which cannot be managed by the other means mentioned, and the same may be said of the two remaining methods.

FATTY ABDOMEN.

Our next case, although not coming under this class of disease, illustrates so well the liability to error in diagnosis of abdominal tumors that I now present her to you that you may especially note the condition and appearance of one of these large fatty abdomens, as simulating disease of the ovaries or uterus.

This patient is thirty-seven years of age, has been married thirteen years, and is the mother of four children. She has menstruated regularly until three years ago, and to-day presents herself to us with an abdominal enlargement, which brings her here to obtain counsel.

You will observe that the abdomen is symmetrically enlarged; there is no irregularity about it. We will now proceed to examine the patient as in the former case. It is always advisable to first make out how

much adipose tissue there is upon the abdominal walls; this I have already instructed you how to determine. In this case, as you observe, if we were to remove all of the adipose tissue, there would be very little enlargement left compared to it now. We now desire to find out if there is any fluid. In this case the abdomen flattens when the patient lies upon the back; that occurs in hydroperitoneum, if the accumulation of fluid is small. Now if there is any fluid, it will be dull on percussion at the most dependent parts. The intestines would float upon the fluid, and give resonance on percussion, but not so below, at the sides of the abdomen; and here, you will observe, we get this dulness on both sides. Now, above here, we do not get a clear tympanitic resonance; but let us compare it with another that is flat or non-resonant on percussion, and you will note the difference. There appears to be a little dulness, but I believe it is due to a loaded colon. In this case we get no diametric wave on palpation, but we get an adipose wave; this is a mere surface-wave; it is not the fluctuating wave within the abdominal cavity which fluid gives. If we were to remove this adipose tissue and empty the colon, we would have an abdomen of normal size.

There is, however, one difficulty in the diagnosis of abdominal tumors that I have not been able to illustrate to you, and it is the most difficult to diagnosticate; it is that condition in which the omentum becomes enormously loaded with fat, sometimes called fatty omentum. In such cases you have evidence of fat in the walls of the abdomen, but it is not enough to account for the enlargement of the abdomen, and you can only make your diagnosis by the tympanitic resonance underneath at the sides of the abdomen; you form your diagnosis by exclusion of hydroperitoneum, ovarian cysts, etc. So you see that, while it is easy to measure the fat of the abdominal walls, it is not so easy to discover the amount of fatty tissue that may be lodged in the omentum. Fortunately this fatty omentum is rather rare, and there are not many cases that have such an amount of fat as to interfere with our diagnosis. The point of interest in this case is that it gives us an opportunity of applying the rule of exclusion in diagnosis. Sometimes, when you have a case in which there are no prominent symptoms or signs, nothing that you can lay your eye or hand upon, and yet in which there is certainly some pathological condition present, you can practise exclusion until you get down to the only thing that it can be. We tell what a thing is, sometimes, by first discovering what it is not. The diagnosis in this case is enlargement of the abdomen from fat and feces. The one can be disposed of by cathartics, the other by proper diet and exercise.

FIBRO-CYST AND SEPTIC CACHEXIA.

This patient I saw at my office a week ago, and I would very much like to have shown her to you at that time; this case is an extremely interesting one. She has that dull, pale, cadaverous look, and is extremely emaciated; in short, she has a cachectic appearance. Now, bear in mind the difference between diathesis and cachexia; the one is a latent tendency, and the other is an evidence of active disease.

The skin in this case has a peculiar, dry, ill-conditioned appearance; she has, then, evidence of some disease belonging to the class of degenerations. Now, upon examination, I find the uterus entirely out of the pelvis; I can just reach the external os, just beyond the superior strait, but I find a mass which occupies this lower zone of the abdomen, extending above and to the right of the umbilicus. I find also that this mass involves the uterus, for I can toss it up between my hands very readily. At the upper portion, it has a little elasticity; and I am inclined to think from her appearance that we have here a cysto-sarcoma of the uterus, which has been developed within the past two years, during which time she has been troubled with menorrhagia.

It is possible that I may have made a mistake, and that this growth commenced as a sarcomatous disease of the ovaries, and then grew around the uterus. About this, however, I am not positive, but I am satisfied that this is not a simple fibroid of the uterus; neither do I think it is a fibroid cyst, for at this stage they do not give rise to this cachectic appearance. This appearance, however, may be due to renal disease, or she may be a malarial subject; I am inclined, however, to believe that this is a growth from the uterus, with a malignant tendency. The point of interest to which I would draw your attention is this cachectic appearance, so characteristic of malignant disease.

We will place this patient upon the arsenical treatment for two reasons: if it is malaria, this treatment is in order; if also her disease be malignant, it is then good treatment. I would advise the use of Fowler's solution with good tonic treatment. Sometimes we can adjust our therapeutic agents when our ideas of the pathology are somewhat cloudy; we will therefore place the patient on this arsenical treatment, although I am in some doubt as to the nature of this growth.

My diagnosis is not complete in this case, and it teaches you an important lesson—viz., we are not always bound to make a positive diagnosis. The best diagnosticians are those who watch carefully their case, and then make their diagnosis subsequently: it is far better to hesitate if you have not the means of being positive. We should do as they do in law; leave room for an honorable escape if possible.

(*To be concluded.*)

ORIGINAL ARTICLES.

REMARKS UPON THE USE OF IODOFORM AS A WOUND-DRESSING,

WITH A REPORT OF CASES IN WHICH IT WAS USED.[1]

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EVER since it has been known that putrefactive changes in wounds and the consequent deleterious effects on patients are due to the presence and activity of micro-organisms, it has been the aim of surgeons to procure a wound-dressing capable of preventing the presence, or destroying the vitality of these intruders. For the last fifteen or twenty years, surgical literature has been replete with suggestions and discussions relating to this subject, and although we cannot be said to have arrived at a conclusion even yet, sufficient advance has been made to revolutionize surgical procedure in many respects.

Listerism has gained many votaries in all civilized communities. It is true that many who once practised it have given it up on account of the cumbersome and complicated technique which its use entails. But the fundamental principle upon which it is based is acknowledged by all, if not in words, in the careful practice of what is couched under the specious term, "cleanliness." More-

[1] Read by invitation before the Cecil County Medical Society, July 11, 1883.

over, carbolic acid was found to be a poison, even when applied to wounds, and had the additional drawback of irritating the surfaces with which it came in contact. Other substances were brought into requisition. Thiersch introduced salicylic acid, and demonstrated its value as a germ-destroyer. Volkman advanced the claims of thymol, and met with much success in its use. Other surgeons introduced other substances, and naphthaline, corrosive sublimate, iodoform, bismuth, and other antiseptics have their advocates.

We aim at perfection, though we may never reach it, and the voices of those who sound the praises of the new discoveries scarcely die away before the warning cries of the critics who discover inefficiency or danger fill the air. But experience in this, as well as in other matters, must be our guide, and we may hope that, in the contest for supremacy, we may at least learn what is best, even if we may not reach perfection.

Being prepared to contribute my mite to the general fund, I have made some experimental study of one of these agents—viz., iodoform—and propose in this paper to give some account of its introduction into surgical practice; its use by others, and to lay before you the results of my own experience with it.

The physical properties and chemical nature of iodoform are sufficiently well known to make any reference to them unnecessary. It has been used in medicine for a number of years as a valuable remedy in certain forms of syphilis and tuberculosis, and it has received deservedly high praise as a local application to ulcers, venereal and simple, and to certain conditions in eye, ear, and throat disease. It was, in fact, its efficacy in checking certain tuberculous processes which led to its introduction as a wound-dressing. Prof. von Mosetig,[1] Moorhof, in Vienna, to whom the credit of its introduction is due, first used the drug in the treatment of fungosities in tuberculous joint-disease, and was struck not only with the manner in which it controlled the fungous process, but also with certain other peculiarities. He observed that in cases in which it was used, it acted as a local anodyne; that the wounds remained perfectly sweet, and that the discharge was reduced to a minimum. This led to the conclusion that iodoform would be a practical and convenient substitute for Listerism, and von Mosetig began to use it in dressing ordinary operative wounds.

After a long course of experimentation, he announced his discovery to the world, and expressed the most enthusiastic admiration for the antiseptic virtues of iodoform. He says: "In the light of my former experience, collected with great care and accuracy, I do not hesitate to say that not only is iodoform a safe specific against local tuberculosis, but also that it acts as an antiseptic in non-fungous surgical lesions, and accordingly deserves a very prominent place among the antiseptics so far known."

[1] Wiener med. Woch., 1880, xxx., 1173, 1202, 1254, 1340, 1392.

After nearly three years' experience, Prof. v. Mosetig comes to the following twelve conclusions. As the first and second relate exclusively to tuberculous fungosities, they will be omitted.

3. For non-fungous wounds, iodoform has shown itself the safest antiseptic, since, on account of its difficult solubility in the tissue-fluids, it remains long in the wound, and develops a continuous antiseptic action.

4. Iodoform locally applied in moderate quantity is not dangerous to the organism, although it is in part absorbed, and eliminated by the kidneys; indeed, in many diseased organisms, this transient presence of the drug in the circulation may be of great use.

5. The immediate action of iodoform in fresh wounds is anæsthetic; later it promotes granulation, and absolutely prevents all septic trouble in the wound.

6. The progress of the wound is most frequently afebrile; sometimes, however, there is exalted evening temperature, though not of septic character, for the first few days. Iodoform sprinkled between wound-surfaces does not prevent healing by first intention.

7. In iodoform dressing, as in all other methods, a way must be provided for the escape of the wound secretion. The soaking of secretions through the dressing does not alter its antiseptic character; only elevation of temperature in the further progress of the wound, which points to retention of secretion, absolutely demands change of dressing for inspection of the wound. Where there are no febrile symptoms (except in the first few days), soaking of the secretions through the dressing indicates a change for the sake of cleanliness only.

8. Traumatic erysipelas with iodoform dressing is very rare; when it occurs, retention of secretion is the cause.

9. Iodoform is so potent an antiseptic that the simultaneous use of any other is unnecessary. For washing the wound, therefore, clean water is all that is necessary; and the use of antiseptic solutions, such as carbolic, boracic, and salicylic washes, although useful, are not absolutely necessary. Cleanness of the part operated upon, of the instruments, and of the hands of the operator and assistants are self-evident requirements, as also gentleness of manipulation and quiet of the operated part.

10. Iodoform dressing is the cheapest, safest, most permanent, and easiest applied of all the hitherto known antiseptic dressings. The materials for the dressing can be found anywhere, and the iodoform powder, as well as the iodoform gauze, may be kept for years without losing any of its virtues.

11. Iodoform allows the use of the antiseptic process after operations in the mouth, in or near the rectum and bladder, surgical procedures in regard to which a thought of complete antisepsis could heretofore scarcely have been entertained.

12. The deodorization of iodoform by Tonka bean allows its use even upon individuals very sensitive to its odor.

Encouraged by the success of von Mosetig,

Mikulicz, and Wölfler, Billroth's assistants, Gussenbauer, Leisrink, and many others, began to use iodoform dressing, and were rewarded by astonishingly brilliant results.

Mikulicz[1] reports the results reached in the immense clinic of Prof. Billroth as follows: "Of fifty-three great wounds, forty-nine pursued an aseptic course. There were but two cases of erysipelas, one in a person who had cheesy glands removed, the other in a case of cancerous infiltration. Innumerable small operations, nerve-stretching, etc., healed mostly *per primam*. The conclusions which Mikulicz reaches are, if possible, more favorable than those of von Mosetig, though set forth more briefly.

1. For all conditions in which the direct application of an antiseptic to a wound-surface is indicated, iodoform is an excellent remedy, and preferable to all others hitherto used. 2. The iodoform dressing completely takes the place of the Listerian, with additional advantage of greater simplicity and increased safety. 3. Iodoform dressing assures asepsis under circumstances in which it has been hitherto impossible. 4. In wounds already septic and in ulcers, iodoform generally purifies them more quickly and safely than any other antiseptic, and without irritating the tissues. 5. Iodoform acts specifically on syphilitic, scrofulous, tuberculous, and lupous infiltrations.

The results and conclusions of others of the earlier observers agreed in the main with those already quoted, and iodoform was used in the most reckless manner. Abscess-cavities were packed with it, joints were filled with it; large operative wounds were covered thickly with it. Some surgeons did not hesitate to put 150 to 200 grm. into a wound. This recklessness could lead to but one result, and cases of iodoform poisoning began to be reported. Dr. A. Henry,[2] assistant to Prof. Fischer in Breslau, reported two fatal cases. In one, a patient fifty-seven years of age, resection of the elbow was done, and 150 to 200 grm. of iodoform were packed into the wound. Death occurred on the fifth day, with symptoms of cerebral character, hebetude, etc.; nausea, rapid, weak pulse, and sunken belly. The autopsy showed fatty heart, liver, and kidneys. In the other case, an abscess at the knee was opened, and between 100 and 150 grm. of iodoform packed in. The patient died on the fifteenth day with symptoms like those of the previous case, except that there was no vomiting. The autopsy was negative. Others reported cases of poisoning, some transient, some fatal, and although the number of cases of poisoning was very small, especially in view of the immense quantities of the drug applied, surgeons became alarmed, and there was a decided revulsion of opinion in reference to the new treatment.

A glance at the accounts of the cases of poisoning serves to indicate that the old and debilitated, especially those with weak hearts, are particularly susceptible to the deleterious influence of iodoform, and warns us to be especially prudent with its use in such cases. And since, as in the case of most of our other valuable medicines, there is sometimes a notable vulnerability to iodoform, we should be always on the look-out for symptoms which indicate intoxication. These warning symptoms refer usually to the head, heart, or stomach, or to all three combined. When there is intense headache, hebetude, excitement, hallucinations, nausea, with or without vomiting, or very rapid and feeble pulse, it is the part of wisdom to immediately change the dressing, wash out the wound, and substitute some other mode of treatment. I believe with close attention to this matter, there is practically little or no danger in the use of iodoform as a wound-dressing.

Iodoform may be used in a variety of ways. The most common and, generally speaking, the best is in the form of powder, or in the crystals. The operation being completed, the hemorrhage controlled, and the wound irrigated with pure or carbolized water, the powder should be sprinkled on with a spatula from a pepper-box, blown on with an insufflator, or even poured on from a bottle. Some prefer to press it into the wound with a spatula, or rub it into the surfaces with the fingers. The object is to bring it in contact with the wound-surface, and it matters little how this is done. In small wounds it may be used freely; in large ones, we must remember the possibility of poisoning, and be more cautious. The more conservative authorities recommend that the quantity should be limited to ʒiij. I have not hesitated to use ʒiv–ʒvss in many instances. The other details of the dressing must depend on the nature of the wound. Sutures or drainage-tubes may be used or not, though it must be remembered that iodoform checks secretion, and many wounds in which drainage would be necessary with other forms of dressing will not require it with this. A layer of cotton, oakum, lint, or other convenient material, covered with macintosh, gutta-percha, tissue, or oil-silk, with a bandage, will complete the dressing. This may be left *in situ* until high temperature (after the second day), soaking through of secretions, pain, or other symptoms call for a change of dressing. I have left a dressing of this kind thirteen days, with none but the best results.

Iodoform gauze may be made very easily, and kept indefinitely. A good formula is as follows: Dissolve ʒxxiij of resin in f ℥xxxvj of 94 per cent. alcohol, and add f ʒiss of glycerine. In this fluid soak 6 m. (about 7 or 8 yards) of gauze (tarlatan), and, when it is about half dry, sprinkle ʒxiij of pulverized iodoform over it. The gauze may be applied to wounds, as carbolized or other gauze, but it is particularly useful in the treatment of wounds in the mouth, in or near the rectum, and in other parts where the powder cannot be conveniently used. An emulsion of any required strength may be made with castor oil or other bland vehicle, and is useful for injection into joints, abscess-cavities, etc. Suppositories made with cocoa-butter are sometimes useful, and a solution in ether may be applied in spray.

Iodoform is certainly a very valuable addition to

[1] Berliner klin. Woch., 1881, 741.
[2] Deutsche med. Woch., 1881, p. 461.

our list of antiseptics, and presents some points of interest well worthy of study. Its portability and the simplicity of its application are points in its favor. Its use reduces the dressing of a wound to the minimum of trouble, and does away with all the complicated details of Listerism without losing any of its advantages. We can attain all that the antiseptic treatment has to offer wherever we can carry a bottle of the powder, and procure a bat of cotton, and for the country surgeon especially it is invaluable. These qualities also peculiarly fit it for the demands of military surgery, and I have no doubt that in the next war it will play a prominent part, even if, as has been suggested by a German surgeon, every soldier is not compelled to carry in his belt a bottle of the drug for the treatment of his own wounds. Iodoform is all-powerful in the presence of bad smells, and acts not merely by the substitution of its own instead, but by destroying them. No putrefaction can go on in a wound dressed with it. Wounds dressed with it, without change for days and even weeks, are found sweet and clean, and putrid wounds soon lose their fetor in its presence. Its power of decreasing secretion is of great importance in many cases, so much so that with it the drainage-tube, which would otherwise be necessary, may be dispensed with. It is without doubt the most powerful antisuppurative agent known. An important point in its favor is its local anæsthetic effect. Different in this respect from many other antiseptics, it soothes where they irritate. Nevertheless, it exercises a gently stimulant effect, and is equal, if not superior, to any agent known in transforming pale, flabby, exuberant granulations into those of a florid, vigorous, healthy character. The length of time a wound may be left without change should not be passed over without proper consideration. There is a great difference both to patient and surgeon as to whether a wound is dressed every day or twice a day, or once or twice a week, and the latter is the rule where iodoform dressing is used.

Against these manifest advantages we must consider the objections. The drug is rather expensive when we speak of it by the ounce, but it must be remembered that a little of it goes a long way, and, once applied, it remains for a long time, so that in the main it will be found to cost but little more than dressings ordinarily used, and by no means as much as the Listerian dressing. Its odor is intensely disagreeable to some, though for myself I must confess that I have the bad taste to rather like it. But it can be masked by a drop or two of the oil of bergamot to the drachm, or, as von Mosetig prefers, by keeping a Tonka bean in the bottle with it. I apprehend that the only real objection to iodoform is its danger, and we are not yet far enough advanced in its use to properly estimate its amount. I am inclined to think we can reduce it to a minimum, if we cannot entirely eliminate it, by watchfulness and care. The latest testimony I can find on the subject is that of Dr. H. F. McGill,[1] of Leeds, England, who concludes, after a six months' use of the drug, as follows: "An enlarged experience may possibly make me change my opinion in regard to the value of iodoform; at present I consider it a safe and reliable antiseptic."

My first experience in the use of iodoform as a wound-dressing occurred last summer. I was called on to amputate a thigh under circumstances of rather unfavorable character. The patient was a man of about sixty years of age; the weather was hot and disagreeable, and I had to operate by candle-light. I concluded to use iodoform as the most convenient dressing. The face of the stump was freely sprinkled with it; the skin-flap sutured, and the ligatures brought out at the lower angle. On the thirteenth day, I met my patient walking on crutches, with the stump healed, except at the angle where the ligatures came out. He had no fever or other bad symptom during his cure.

When my hospital service began in January last, I determined to give the drug a fair trial, and I have the pleasure to-day to lay the result before you. I take this occasion to express my thanks to Dr. Ralph Steiner, Assistant Resident Physician of the Maryland University Hospital, to whose zeal and care I am indebted for full notes of all the cases treated, from which notes this report is abstracted.

CASE I.—G. A. F., aged 23, railroad employé; large axillary tumor on the right side (round-celled sarcoma), about four pounds in weight. The operation left the axilla pretty clean, and the arteries and veins exposed, etc. The whole wound-surface was sprinkled with iodoform in powder, a drainage-tube was placed in the lower angle, and silver wire sutures were used. A pad of oakum and a bandage completed the dressing. The operation was done January 26th, and on the 27th there was slight nausea during the night, no pain; temperature 99°; pulse 98. 28th: temperature 100°; pulse 100. 29th: temperature 101°; pulse 100. 30th: temperature 98.4°; pulse 100. 31st: temperature 101°; pulse 88. The wound was dressed and the tube removed. The discharge was found to be scant. The wound was washed out, dusted with iodoform, and covered, as before, with oakum pad and bandage. From this time the wound was dressed about every fourth day, and the favorable progress of the case was uninterrupted. He was discharged, with a small superficial granulating wound, at the end of the third week.

CASE II.—A. Davis, colored, aged 43, laborer; caries of the carpus; amputation at wrist; dressed with iodoform as in the above case. On the second day there was slight pain; temperature 101°. From this time there was neither high temperature, pain, nor other indication for removing the dressing. It was removed, however, on the thirteenth day, and the wound was found united in great part. A few fistulous openings, however, remained, and upon subsequent probing it was found that the bone disease had invaded the lower end of the radius, and another operation became necessary, which will be reported below.

CASE III.—Mrs. C. A., aged 50; amputation of breast (left side) and removal of axillary glands, necessitating dissection of the axilla. The patient

[1] Lancet, May 26, 1883.

was weak and nervous, with rapid, weak pulse before the operation. The wound was dressed with iodoform, oakum, and bandaged, with drainage-tube in the axilla. Second day: as there had been some oozing and discharge (serous) from the wound, it was dressed as before; temperature 101°; pulse 150. Third day: temperature 100°; pulse 130. Fourth day: temperature 99.3°; pulse 130. Fifth day: the patient was weak and semi-delirious; nauseated; pulse was more rapid and weaker; ordered the iodoform removed and carbolized oil substituted. From this time, however, the patient grew weaker, the cerebral symptoms becoming more aggravated, and died comatose on the eighth day after the operation. (This case will be discussed more in detail below.)

CASE IV.—Fritz B., aged 10; amputation of thigh (middle-third). The patient's leg had been crushed five days before. He was brought into the hospital with a leg gangrenous to the knee, and his general condition was extremely feeble. The amputation was done, as a forlorn hope, by the circular method. The wound was dressed with iodoform, oakum, and bandage. Second day: temperature 102°; pulse 150, very weak. Third day: temperature 101.4°; pulse 140. From this time the patient gradually improved until the eighth day, when a discharge having appeared through the dressing, it was changed for the first time. The outer half of the wound was found healed by first intention. From the inner and lower angle there was some bloody serous discharge. The wound was washed out and dressed as before. On the ninth day tetanus developed, and, although the patient recovered fully from both that disease and the amputation, the remainder of the temperature record was made worthless for the purposes of our present study.

CASE V.—Harriet B., colored; small axillary tumors secondary to cancer of the breast, which I removed four years ago. The operation involved considerable laceration of the axillary tissues. The wound was dressed with iodoform, oakum, drainage-tube, and bandage. The dressing was left *in situ* for a week, during which time the highest temperature developed was 99.4°, on the evening of the second day. The drainage-tube was then removed, and two days later the patient was discharged, with a very small superficial granulating wound.

CASE VI.—Mrs. S., aged 58; cancer of cicatrix, from amputation of breast and several axillary tumors. The patient was very stout. The incision was thirteen inches in length. All cancerous parts, as well as axillary glands, were removed. The wound was dressed with iodoform, oakum, the tube, and bandage. The highest temperature, 100.1°, was on the evening of the fourth day, when the dressing was removed for the first time. Some pus was retained in the axillary portion of the wound. About two-thirds of the incision healed *per primam*. The wound irrigated. Fifth day: temperature 99°. After the fifth day the patient was subject to slight mental aberrations, probably due to mild iodoform-poisoning, but nevertheless made a good recovery.

CASE VII.—John P., aged 55, laborer; amputation of arm (middle). The wound was dressed with iodoform, oakum, and bandage. Second day: temperature 100.2°; pulse 112. Third day: the patient died of traumatic pneumonia, due to fracture of two ribs received in the same injury which made the amputation necessary. One of his legs was also severely crushed.

CASE VIII.—Lizzie H., colored, aged 25; axillary glands, due to cancer of the breast, were removed five years ago. All hardened glands that could be found in the axilla were removed. The wound was dressed with iodoform, oakum, and bandage — no tube. Second day: temperature 103°; pulse 90. Third day: temperature 103°; pulse 110; the dressing was removed and the wound was doing well in every respect. The examination, however, showed localized pleuritis, which accounted for the high temperature and pain complained of, and also vitiated the record as far as the temperature is concerned. The patient, however, did well, and was discharged at the end of the second week with her wound nearly healed.

CASE IX.—A. D., aged 43, colored (same patient as Case II.); amputation of forearm. The stump was dressed with iodoform, oakum, and bandage. On the evening of the third day the temperature was 100.2°, and he complained of pain. The dressing was removed, and a somewhat abundant thin serous discharge was found. From this time it was dressed daily and irrigated with carbolized water. On the evening of the fifth day the temperature reached 102°, which was the highest point; afterwards everything went well and the patient made a good recovery.

CASE X.—Martha E., colored, aged 37; breast amputated and axilla cleaned out. The incision was eleven inches long. The wound was dressed with iodoform, oakum, and bandage, with tube. The highest temperature was 101.4°, on the evening of the second day. The dressing was removed on the sixth day, and more than half of the incision had healed. Three-fourths of the tube were cut off; the discharge was very scanty, and she left the hospital nearly healed on the twelfth day.

CASE XI.—Henrietta M., aged 20, colored; large osteo-enchondroma of the neck, in apposition to the angle of the jaw. It was removed by incision and finger dissection, and dressed with iodoform, oakum, tube, and bandage. The highest temperature was 102°, on the evening of the second day. The dressing was changed on the third day, very little discharge, tube removed. From this time there was uninterrupted favorable progress, and she left the hospital on the twelfth day.

CASE XII.—Harriet H., aged 67, colored; amputation of the breast and removal of the axillary glands. The wound was dressed with iodoform, oakum, and bandage. As there was considerable discharge on the second day, the dressing was changed. The highest temperature was 101.1°, on the fourth day. This patient was very feeble and required tonic treatment, but suffered from no surgi-

cal accident. She left the hospital at the end of the third week, with the wound practically healed.

CASE XIII.—Antonin B., aged 43; traumatic hematocele of the tunica vaginalis, right side, with laceration of the testicle; sac laid open; clots and disorganized blood turned out; sac irrigated and well sprinkled with iodoform; cotton-pad and bandage completed the dressing. Third day: temperature 102°; dressing removed, and some retention found. Dressing changed daily, as the discharge was abundant. No septic or other trouble developed, and the patient left the hospital on the eighteenth day, with a wound only half an inch long, and granulating satisfactorily.

CASE XIV.—Patience S., age 51, colored; large atheromatous tumor of back, removed by elliptical incision; wound dressed with iodoform, cotton, and bandage; highest temperature 102.2°, on evening of second day. Dressing was, however, not removed until the fifth day, when all the wound, except the lower angle, was found healed *per primam*.

CASE XV.—John H., age 27; sequestrotomy; old necrosis of lower end of femur; involucrum opened with chisel and mallet, and sequestrum, about five inches long, removed in pieces; wound irrigated, and about sixteen grm. of iodoform poured into it. Oakum and a bandage completed the dressing. Highest temperature 101.4° on second day. The dressing remained *in situ* five days, when, as the discharge was abundant and foul, on account of the dead bone, it was changed. This patient spent but two days in bed, and the remainder of his progress while he remained in hospital was afebrile. He left on the ninth day, preferring to dress his wound at home.

I have also used iodoform on a number of interesting cases in private practice, of which I have kept no record, and on a large number of trivial cases which I have not thought worthy of consideration. I have given the more important cases in which the drug was used, and although the number is too small to warrant any general conclusions, the report may serve to aid us somewhat in forming an estimate of the iodoform treatment. For my part, my experience with it thus far encourages me to go on, at least, until I find something that will produce the same good effect without the danger of poisoning.

The summary of my results is as follows:

Greater amputations,	4
Sequestrotomy,	1
Axillary tumors,	4
Amputation of breast and axillary glands,	3
Atheroma of back,	1
Tumor of the neck,	1
Hematocele laid open,	1
Total,	15

In these fourteen greater operations, excluding atheroma of the back as rather a small matter, there was seen no septic trouble whatever. The highest temperature reached was 103°, which occurred upon the supervention of a pleuritis in a patient whose surgical condition was excellent. There were two deaths. One of them—VII.—occurred in a man who had been driven through a brick wall by a locomotive, and came to us with an arm crushed to pulp; collar-bone and scapula broken; two ribs fractured, and a mangled leg, besides probable internal injuries. Amputation was done as an act of humanity, to relieve shock and diminish pain, and produced the effect expected. No hope was entertained of recovery. The other death—III.—is far more interesting. I look upon this case as one of iodoform-poisoning. It will be observed in referring to the record that, upon the supervention of symptoms indicative of intoxication, I immediately ordered a change of dressing. I am prepared to confess that I was very much shocked when I saw the patient the next day to find that she was worse, instead of better, and greatly chagrined that efforts to stimulate produced no effect. It was only after the patient was dead, upon investigating the case, that I learned that the student whose duty it was to dress the wound had not seen the order to change and irrigate in the ward-book, and so had continued to dress the wound with iodoform until the day of the patient's death. I believe that if my order had been carried out, this patient would, in all probability, have been counted among the successful cases. I have had one other case besides the one mentioned in the report (VI.), in which, in an old woman with a large ulcer, which was being treated and (very successfully) with iodoform, symptoms of intoxication developed. The patient became weak, and complained of constant nausea. Change of treatment promptly relieved the symptoms.

My experience seems to justify the following conclusions in regard to iodoform as a surgical dressing:

1. It is a most valuable and convenient dressing, possessing great antiseptic power, and being perfectly simple in its application.
2. Its local anæsthetic power adds to its other advantages as a wound-dressing.
3. It decreases secretion in wounds, thereby making dry and infrequent dressing possible.
4. It does not prevent healing *per primam*.
5. It is dangerous, and should be used with great circumspection, especially in old and debilitated subjects and those with weak hearts.

246 MADISON AVENUE, BALTIMORE.

LEAD-POISONING FROM CANNED FOOD.

BY WILLIAM E. MAGRUDER, M.D.,
OF OLNEY, MARYLAND.

I HAVE under my care at this time a young lady, suffering from chronic lead-poisoning, whose case is interesting, both because it has presented during its progress so many of the phases of the poisonous effects of lead, as well as from the source whence the poison was introduced into the system.

In this case, there have been the colic, arthralgia, and paralysis, involving first the extensors of the wrist, and then those of the lower extremities, and extending also to the flexors of both. The lead-

cachexia was well marked, and the bluish line on the gum very distinct. The electric sensibility was much lessened, and the contractility to both faradic and galvanic currents was for a time entirely lost in the lower extremities, and very much lessened in the upper. The atrophy of the paralyzed muscles was also well marked. The young lady, though much improved, will probably never entirely recover. The case was also seen by Dr. C. G. Stone, of Brightwood, D. C.

I will not further allude to the symptoms of the case, though some of them were of great interest, as my object in writing is to call attention to the source whence the lead was introduced into the system, and to some observations I have since made in regard to the danger of poisoning from the same cause. After much trouble, I traced it to the use of corn put up in tinned cans by a recipe that required the use of tartaric acid. I tested the contents of several cans, and detected the presence of lead. This must have been derived either from the coating of the cans or the solder, or both.

Upon applying a drop or two of nitric acid to the surface of the can, allowing it to dry, and adding a solution of iodide of potassium, there was found the characteristic yellow spot. I then tested with the same test a number of cans in which food had been preserved, and found in all evidence of the presence of lead. Dr. Onderdonk, of St. James's College, Md., tested, at my request, a number of scraps of tin of which cans are made, and only found two which did not show its presence.

Dr. Dorsh states (*Chicago Med. Journal and Examiner*, Sept. 1878) that of a large number of specimens of tin plate, tinned cans, and other culinary articles examined by him, he found in almost every instance an alloy with lead, and it was often in large quantities.

These observations go to show that much of the coating upon the cans is not pure tin, but an alloy with lead. We are not as yet in possession of any facts which show tin as forming any compounds with the vegetable acids which give rise to poisonous effects, either acute or chronic, but we do know that lead forms such compounds. Now, if further investigations show that most of the cans used for canning are coated with an alloy of lead and tin (which is more readily oxidized and dissolved by acids than either metal by itself), what is more probable than that there should be injurious effects from this source?

I have a letter from Dr. Thomas Antisell, Principal Examiner of Chemicals in the Patent Office, in which he makes the following statement: "It is well known that all commercial tin is alloyed with lead, even up to the grade known as pure tin-foil, and the manufacture of tinned cans for the canned-food industry must place the food so preserved in the condition most likely to contain lead salts mixed with the organic matter; this is particularly liable with canned fruit." I have also a letter from Prof. Wormley, of the University of Pennsylvania, to my friend, Mr. C. Farquhar, who, at my request, had made inquiries on the subject, in which he says: "The use of canned fruits has, in a number of instances, been attended with the results you describe."

In *The Philadelphia Medical Times*, for May, 1874, a case of poisoning is reported from this cause. In *The Quarterly Compend. of Medical Science*, July, 1883, there is an account of an outbreak of lead-poisoning among 150 men of a regiment in the Southern Tyrol, one case ending fatally, and forty-five requiring to be treated in hospital, besides others who were not disabled for duty. The cause of the outbreak was traced to the tin-lined copper vessel in which their food was cooked, the coating of which contained lead. This shows the danger of poisoning from the coating used in tinning. There are a few other cases recorded to which I might refer as bearing upon the subject.

When we consider how much canned food is consumed, we should expect to find reports of a very large number of cases of poisoning from this source, if lead is present in the coating of the cans. But such is not the case. Very few, as far as I have been able to ascertain, have been reported. This may be owing to the fact that only a comparatively small number of physicians report cases. It may also be due to the fact that many minor forms of lead-poisoning have not been recognized and treated as such. Now there is no difficulty in diagnosticating a case of well-marked lead-poisoning, but it is not so with slighter cases. Several other members of the family in which my case occurred complained of a bad taste, pains in limbs, general malaise, numbness of the hands and wrists, etc., which would not have been ascribed to that cause had not my attention been called to them in the other case. I found then the characteristic blue line on the gums. The first cases which occurred among the soldiers of Southern Tyrol, reported above, were treated as muscular rheumatism.

How many physicians who have not had their attention specially called to lead-poisoning, would recognize as a mild form of "lead encephalopathy" such a case as described by Dr. Hammond, thus:

"The patient suffers from headache, vertigo, and various other abnormal sensations, such as fulness and constriction, and at the same time is incapable of much intellectual exertion without suffering an increase of his physical symptoms. His mind is irritable and depressed, and his sleep is generally disturbed with unpleasant dreams. The digestion is generally deranged, and the whole appearance may be cachectic . . . . This condition may undergo no further development, but it is often the precursory state of the more severe form of the affection."

Dr. Anstie, in his treatise on *Neuralgia*, uses the following language:

"Lead poison sometimes enters the system continuously, for a long period, but in proportions too minute to produce the effects which we identify as an attack of lead-colic . . . There is a minor degree in which it may happen that the local affection (owing, I believe, to a less extensive deposit of lead in the bowel) does not reach the decidedly paralytic stage; the state then is one of irregular and painful spasms of individual fibres (quite possibly intermingled with paralysis of a few others), and the practical result is irregularity of evacuation—now diarrhœa and again constipation—and the frequent recurrence of twinges of pain that

are easily mistaken for abdominal neuralgia. Such symptoms as these are nearly always found to have occurred, if proper inquiry be made, in those examples of chronic lead-poisoning in which the toxic process goes on to the development of epilepsy, or marked symmetrical paralysis of the wrist-extensors, without the patient ever having suffered an attack of ordinary colic. In these slow and insidious cases, the constitutional affection may not have reached the height at which the complexion and general aspect of the patient suggest metallic poisoning, and the case may present very neuralgic-like features . . . It is therefore an excellent rule, in all cases of chronic, recurrent, spasmodic pain in the abdomen, especially in men, to investigate the possibilities of lead-poisoning, and if the slightest suspicious appearance of the gums be found, this track of inquiry must be followed up exhaustively before we abandon the idea."

Naunin, in Ziemssen's *Cyclopædia*, vol. 17, page 626, says:

"Frequently, poisoning of a mild grade is said to be caused by eating acid or fatty articles of food which have been kept in tinned vessels, owing to the solution of the metal. It is to be remembered, however, that tin is frequently contaminated with lead, copper, and arsenic, or that alloys of tin and lead are used instead of ostensibly pure tin. Thus, the so-called rose tin (Bohemian tin) is said to contain as much as ten per cent. of lead."

In the Report of the Court of Inquiry on the loss of the Arctic steamer Jeannette, I find there statements which, I think, still further confirm the views expressed.

On page 30, Lieut. Danenhower, in answer to this question by the Court, "Did the character of the provisions supplied to the Jeannette cause sickness at any time?" said, "In May, 1881, a number of the people became affected with stomach disorders, which were attributed to tin-poisoning. It had been observed that the inside of the tomato cans had turned dark, as though acted upon by the acid. . . . The tomatoes were marked Red Cross brand, and were excellent in quality most of the cruise. They had been subjected to two winters' and two summers' exposure."

On page 36, in answer to a question by the Judge Advocate as to the physical condition of the men when landed on the ice, June 1, 1881, the same witness said, "The physical condition was good, with the following exceptions, viz.: Lieut. Chipp was disabled and prostrated by what was supposed to be tin-poisoning. . . . A number of men, among whom were seamen Kuchne, coal-heaver Lauterbach, and the steward, Charles Long Sing, were also affected by the tin-poisoning, and were prostrated a few days later."

I have no doubt that the so-called "tin-poisoning" was really lead-poisoning, resulting from the use of cans coated with the alloy of tin and lead.

I therefore believe that if the possibility of poisoning from this source were kept in mind and investigated, and observations made in that direction, many cases would be recognized as such, and light thrown on many obscure ones that have puzzled us.

In the *American Chemical Journal*, vol. 14, No. 6, there is an article on the action of vegetable acids on lead and tin, where the author's observations in regard to the purity of tin and the danger of poisoning from canned food, differ from what is stated above. I have not the article at hand to quote from, but will close mine with the hope that a thorough investigation may be made into the subject by those best qualified to do so.

August 13, 1883.

THE SPLANCHNICS.

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OF EASTON, PA.

IT is well known that Pflüger[1] discovered that these nerves inhibit intestinal movements. He found that when the electrodes are inserted about the fifth and eleventh dorsal vertebræ, that a faradic current sent through them arrested the peristalsis of the small intestine, but did not affect the larger one. It has also been shown by Keuchel that large doses of atropine paralyze these inhibitory nerves.[2] In another paper[3] I have tried to uphold the theory that besides the intestino-inhibitory we also have an intestino-motor apparatus, and that some drugs excite the inhibitory and others the motor apparatus of the intestine. In this paper I shall still further adduce facts in support of the preceding theory by a study of the action of the same drugs on the splanchnics.

Method: Rabbits were etherized by the subcutaneous use of the anæsthetic, then the drug injected subcutaneously, and Ludwig's needle electrodes inserted into the fifth and eleventh dorsal vertebræ. The abdomen was opened, and the intestines covered with a towel wet with a one-half per cent. salt solution heated to 98° F. The room, during the experiments, had a temperature ranging between 90° and 98° F. When the intestinal movements were active, a strong faradic current from Du Bois' inductorium was sent through the electrodes, and the effect on the peristalsis noted. The reaction of the intestine was always tested by the salt crystal according to the method of Nothnagel. The salt always causes a wave of contraction running towards the pylorus. With nicotine and muscarin, the salt causes a wave of contraction upward and downward from the crystal. When a milligramme of atropine was given subcutaneously, in about ten minutes the salt-reaction failed, and when the splanchnics were irritated the peristalsis was arrested. If now .0005 gramme of the salicylate of eserin was given to the same animal, the result was the same, except the salt reaction is present.

It is not so easy to find the intestine in active movement, when small doses of atropine are given, so as to judge of the influence of the splanchnics. If, however, a larger dose of atropine, .004 gramme, is given, then, as Keuchel has already proved, the irritation of the splanchnics fails to arrest peristalsis, the bowels respond again to the salt. If morphia in small doses is given, the salt-reaction fails, as Nothnagel noted, but the splanchnics are still

[1] Ueber das Hemmingsnervensystem für die Peristalsis den Bewegungen des Gedarme, Berlin, 1857.
[2] Das Atropin und die Hemmipgsnerven, Dorpat, 1868.
[3] New York Medical Journal, 1883.

active when irritated. If nicotine is given to the same animal, the salt-reaction runs in both directions, and the splanchnics are still active for a period, till large doses are given, when they do not inhibit. It was also noted that morphia, when followed by a moderate dose of nicotin, kept the bowel free from the tetanic spasm of the latter drug, as happens when it alone is given. In the one case, the bowel is relaxed, in the other contracted. If muscarin is given subcutaneously the salt-reaction spreads in both directions and the splanchnics are still active. If a small dose of eserin is given the splanchnics are active when the peristalsis is active, later they seem to become weaker. If large doses of morphia sulph., .2 gramme, are given subcutaneously, the salt-reaction is present and the splanchnics are nearly absolutely paralyzed. It is possible with the eserin, nicotine, and muscarin that they so excite the intestino-motor ganglia that the splanchnic inhibition is not able to overcome it when large doses of the drugs are given. It is certain that nicotine, eserin, and muscarin do not excite the peristalsis by a paralysis of the splanchnics, as large doses of atropine and morphia do.

These experiments lead to the conclusion that drugs act on the intestino-motor and intestino-inhibitory apparatus. That with the inhibitory drugs, atropine and morphia, in small doses the splanchnics are active, and with large doses of the same drugs they are paralyzed. That with the intestino-motor drugs, nicotine, muscarin, and eserin, the splanchnics in the beginning are not paralyzed by small doses, and that large doses of nicotine and eserin greatly weaken them.

It might be supposed that all these drugs act on the muscular fibre, and thus produce these peristaltic changes, for Dr. Gaskell has shown that muscarin arrests the apex of a frog's heart, which contains no ganglia. Whilst I do not exclude a partial action on other parts of the intestine, yet the active peristalsis must certainly have some other apparatus than the muscular fibre to depend upon. I feel quite confident that the ganglia of Meissner, Auerbach, and the isolated ganglia of Klein, play the main *rôle*.

To one who has microscopically examined, by the gold method, these ganglia, their large number and extensive ramifications will make the theory of nervous origin seem a quite reasonable one.

Experiment I.—Rabbit: Etherized, received .001 gramme of atropine subcutaneously. In twenty minutes abdomen opened, no salt reaction present. After watching intestinal peristalsis for some time, a strong faradic current was sent through the electrodes and the peristalsis arrested. Then .0005 gramme eserin was given subcutaneously; still irritation of the cord caused arrest, even when the salt-reaction was present.

Experiment II.—Rabbit: Etherized, .02 gramme morphia subcutaneously. In twenty minutes the salt-reaction failed. Spinal cord irritated, and the intestinal movements were arrested. Then .0005 gramme eserin subcutaneously, after which the intestine responded to salt. Irritation of cord arrested the movements.

Experiment III.—Rabbit: Etherized, received .001 gramme atropine subcutaneously; salt-reaction not present; irritation of cord arrested peristalsis; .004 gramme atropine given. In about twenty minutes afterwards the salt-reaction was present, and irritation of the spinal cord failed to arrest the movements.

Experiment IV.—Rabbit: Etherized, received, subcutaneously, .015 gramme morphia; salt-reaction was not present; irritation of spinal cord arrested peristalsis. Then 1 gtt. of nicotine given subcutaneously. In twenty minutes salt-reaction marked; faradic irritation arrested the intestinal movement. Another drop of nicotine was given subcutaneously; salt-reaction in both directions; faradic irritation had less and less effect, till it failed to arouse the inhibition.

Experiment V.—Rabbit; Etherized, received 1 gtt. muscarin sulph. subcutaneously; salt-reaction present in both directions; faradic irritation arrested the movements for about forty minutes after the injection of the drug. The saliva was flowing profusely from the action of the drug.

Experiment VI.—Rabbit: Etherized, received .2 gramme morphia subcutaneously. In about half an hour the splanchnics were nearly completely paralyzed.

Experiment VII.—Rabbit: Etherized, received .0008 gramme eserin subcutaneously. In fifteen minutes the splanchnics were still active, although tetanus of the intestine was present.

Experiment VIII.—Rabbit: Etherized, received 1 gtt. of nicotine subcutaneously. In the beginning the splanchnics were active, but finally they failed to respond.

MEDICAL PROGRESS.

TREATMENT OF TUMORS BY ELECTROLYSIS.—NEFTEL has returned to this method of treating malignant tumors, destroying them at a single operation. A platinum anode is plunged perpendicularly into the tumor down to its presumed point of implantation, and from three to five cathodes placed on the periphery of the tumor. The current is then closed and rapidly carried to its greatest power (30 to 60 elements). The position of the cathodes is changed about every five minutes, so as to cover every part of the tumor. The operation lasts about an hour. The tumor becomes livid, gray, and finally black. There is a very slight general, and local reaction. In two or three days the part operated upon becomes cold, and after some discharge finally comes away *en bloc*, leaving a denuded surface which is soon covered by healthy granulations. Neftel has also treated benign tumors by this method, though they do not require such energetic treatment as those of the malignant type. The conclusions which he draws are: 1. Electrolysis is an antiseptic method, and as such may be combined with the ordinary methods of operation. 2. It is preferable to any other method in the treatment of malignant tumors. 3 Malignant tumors should be entirely destroyed by the operation, and at a single séance. In benign tumors it is sufficient to establish a retrograde metamorphosis.—*Virchow's Archiv*, Bd. lxxxvi. Hft. 1.—*Bull. Gén. de Thérap.*, July 30, 1883.

RUPTURE OF THE SMALL INTESTINE: RESECTION.—At the meeting of the Société de Chirurgie on Aug. 1st, M. Berger made a report on the cases previously reported by DR. BOUILLY. The patient, a strong young man, was kicked by a horse just above the umbilicus, and immediately felt a very violent pain in the abdomen. Some hours later he was admitted to the hospital with all the signs of peritonitis. Rupture of the intestine was diagnosticated, and laparotomy was performed. Two ruptures were found at a short distance from each other, with violent congestion of the intestine and escape of the contents into the peritoneal cavity. M. Bouilly, in view of the double rupture, resected the injured portion, and removed an injured portion of the mesentery at the same time. A double series of sutures was put in, the peritoneal cavity carefully dressed, and the abdomen closed. Opium was administered to prevent peristaltic action, and a little champagne and rum given as a stimulant. Although the patient felt better after the operation, the peritonitis, though evidently decreasing, continued. On the second and third days the change for the better was still more marked, the pulse being sensibly stronger. On the third day the bowels acted naturally, but at the same time the sutures ruptured and fecal matter escaped through the abdominal wall. In spite of this accident, the patient did very well until the eighth day; at this time M. Bouilly made an exploration of the wound with one finger. A few hours later, violent pains came on, with vomiting, and the patient succumbed in twenty-four hours.

At the *autopsy* the sutures were found to have given away, but it was evident that the sutured ends of the intestine had been held together by plastic material thrown out by the local peritonitis; and it is probable that the exploration had ruptured this adhesion, causing fecal extravasation and general peritonitis.—*L'Union Méd.*, August 14, 1883.

CHRONIC INTESTINAL CATARRH.—PROF. NOTHNAGEL, at the meeting of the K. K. Ærztlicher Gesellschaft zu Wien., on May 18th, spoke on the subject of chronic intestinal catarrh, which, he said, has been little mentioned in text-books. There is also no explanation given, in physiological text-books, of the fact that healthy individuals have generally only one stool in the twenty-four hours; and Nothnagel thinks that no explanation can be given, but that it is one of those arrangements, depending partly on the anatomical relations of the parts, and partly on innervation, for which we cannot account. Chronic intestinal catarrh may be considered to be present when mucus appears in the motions, although the absence of mucus must not be regarded as conclusive evidence against the existence of catarrh.

Nothnagel divides the cases of chronic intestinal catarrh into four classes: 1. Those patients who have a stool every second or third day, often produced artificially; this is the type of primary chronic catarrh of the large intestine, and depends, according to Nothnagel, on diminished anatomical activity of the ganglion-cells: 2. Cases where a stool is passed daily, but each time thin, pulpy, and mixed with mucus: 3. Cases with irregularity in the state of the bowels, sometimes constipation, sometimes diarrhœa, and sometimes an alternation between the two; the diminished activity of the nerve-cells explains the constipation, and the irritation of the feces causes eventually the diarrhœa, which may also be excited by a very small error in diet. 4. Cases with continued diarrhœa. Here, however, chronic ulceration of the bowels must be distinguished from catarrh. Where diarrhœa is present without ulceration of the large intestine, Nothnagel has always found an affection of the small intestine as well. When the food does not undergo its normal changes in the small intestine, it acts as an irritant on the mucous membrane of the colon, and causes the diarrhœa. Some patients have a stool after each meal, some after a mid-day meal only, and some after an evening meal only. Nothnagel would explain this by referring it to nervous influence.—*London Med. Record*, July 15, 1883.

DECOCTION OF LEMONS IN MALARIAL FEVER.—DR. MAGLIERI has recently used a decoction of lemons in cases of intermittent fever, with much satisfaction. It was first used in three bad cases, being administered about four hours before the expected paroxysm. The results were, absence of the paroxysm in one case, only a slight paroxysm in the second, and sensible amelioration of all the symptoms in the third, a case in which quinine had failed to produce good results. A fourth case is also reported in which large doses of quinine had no effect, but in which decoction of lemons was successful. Maglieri concludes that: 1. Decoction of lemons employed in malarial affections gives results equal, and often superior to those of quinine. 2. It is not only efficacious in the same cases in which quinine gives good results, but in cases in which the latter has no effect. 3. It is not less efficacious in chronic than in acute malarial affecions. 4. It has none of the inconveniences of quinine (irritating action on the mucous membranes and roaring in the ears). 5. It may be given even during a catarrhal state of the digestive tract. The decoction is prepared by cutting a fresh lemon into small pieces; three cups of water are then boiled down to one cup, the pieces of lemon are put in and thoroughly pressed. It may be given when cold.—*Bull. Gén. de Thérap.*, July 30, 1883.

PHYSIOLOGICAL PROPERTIES OF DOUNDAKÉ AND DOUNDAKINE.—The doundaké is a shrub of the rubiaceæ family, and is found on the western coast of Africa. The bark, employed by the natives as a febrifuge, has a very bitter taste. MM. BOCHEFONTAINE, FÉRIS, and MARCUS have isolated an organic base from the bark—a yellowish powder, formed of microscopic rhombohedral crystals. This powder is bitter, soluble in water and alcohol, and of an alkaline reaction. In Winkler's fluid it precipitates phosphotungstic and phosphomolybdic acids. The experimenters have given it the name "doundakine." Its action on the frog is as follows: The hypodermatic injection of gr. ⅛ of doundakine, representing grs. xxx of the bark, produces death in thirty-six minutes. The physiological effects of the bark and doundakine are identical, and may be stated as follows: In the frog, in from two to five minutes, there are noticed a little feebleness and diminution of spontaneous and reflex movements, the frog being incapable of assuming a normal position. Placed in any particular position, he remains so without attempting to change it. Muscular contractility and nervous excitability were maintained, and the heart's action was not sensibly modified. This first period is followed by a second, in which the respiratory movements are irregular and then intermittent, become slow, and are finally arrested, while the heart-beat is regular, though somewhat slower. The reflex movements are gradually abolished.

The same results are obtained when the experiment is made on a frog from which the brain has been removed. But if the cord is cut at the level of the calamus, the frog dies without presenting the above phenomena. The striking fact of the action of the drug is the progressive slowing and arrest of respiration, which takes place while the heart's beat is perfectly regular. The experimenters conclude that doundakine is a toxic agent, acting more particularly

on the medulla and cerebellum, and inducing a cataleptic state.—*Gaz. Hebdom.*, Aug. 3, 1883.

RESORCIN AS A LOCAL APPLICATION.—DR. BOMBIN has made extensive trials of resorcin, oxyphenol or diatomic carbolic acid ($C_{12}H_6O_4$), as a local application. He uses the drug in the form of alcoholic solutions of different proportions. The first, of equal parts of resorcin and alcohol, has a distinctly caustic action; the second, of one part of the acid to ten of alcohol, and the third of one to twenty, are stimulant and antiseptic. A one per cent. solution is found to perfectly prevent decomposition. In obstinate syphilitic ulceration, Dr. Bombin first cauterizes the surface of the sore with the 100 per cent. solution, and then applies the 10 per cent. solution night and morning till the eschars are separated, and afterwards the 5 per cent. one till cicatrization is complete. He speaks most highly of his success in cases which had been before very intractable. As a local application, he has had very good results in orchitis and epididymitis with a 6 per cent. solution, and uses a 1.5 or 2 per cent. solution with good effect to wash out the bladder, but he considers that it acts in the latter cases simply as a local disinfectant. Moreover, he has not found that, taken internally, it has any curative action in such cases, as has been stated, and similar indecisive results followed its internal administration in cases of strumous glandular affections. In epithelioma of the cervix uteri, its local action does not seem to differ at all from that of carbolic acid; taken internally in large doses, the drug appeared to exercise a certain arresting influence on the spread of the disease, and there was some attempt at cicatrization. On the whole, it is plain that, in Dr. Bombin's opinion, resorcin is a very valuable local application for chronic tertiary ulcerations, exerting on them a distinct curative action, but that the value of the drug when taken internally is doubtful, and that, as a local application, in most cases it is not superior to carbolic acid as a disinfectant, save that it has less smell, and is more soluble in water, ether, and alcohol. —*London Med. Record*, July 15, 1883.

EUCALYPTUS IN PULMONARY GANGRENE. — DR. BONAMY, of Nantes, reports an interesting case of pulmonary gangrene in a patient, æt. 50, who came into the hospital on Oct. 15, 1882. There were fever and dyspnœa, mucous râles in both lungs, but especially in the left; feeble pulse, and the well-known gangrenous odor, so intense that the patient had to be placed in a separate room. The sputum was composed of blackish nodules. There was a great deal of cough which increased the intensely disagreeable odor of the breath. After trying a carbolic acid mixture for two days and finding no improvement in any symptom, Dr. Bonamy prescribed the following: Alcoholate of eucalyptus, ♏xxx; sweetened water, f℥iij; syrup of poppies, f℥v; quinine being given at the same time. On Nov. 6th, twenty-two days after the patient was first seen, the bad symptoms had almost entirely disappeared.—*Bull. Gén. de Thérap.*, July 30, 1883.

LIGATION OF THE COMMON ILIAC.—At the Twelfth Congress of the German Surgical Association, KÜMMEL, of Hamburg, reported the case of a young man, æt. 21, upon whom the operation for double extirpation of bubo had been performed. Though antiseptic precautions were used, a diphtheritic process was set up in the wound in the left side, and four days after the operation the external iliac was ligated on account of hemorrhage from the central end of the femoral. Secondary hemorrhage again occurred, and the common iliac was ligated. Ten days afterwards, profuse secondary hemorrhage occurred from the peripheral end of the femoral on account of gangrene, and amputation was performed. The patient finally recovered. Ligation of the common iliac has been performed fifty-five times, the great majority of the operations having been performed by English and American surgeons. It has only been done three times in Germany, all fatal. Of the fifty-five cases, forty-one were fatal, from collapse, gangrene of the extremities, and septic infection from the wound.—Beilage zum *Centralbl. f. Chirur.*, No. 23.

COMPOUND COMMINUTED FRACTURE OF THE SKULL, WITH WOUND OF THE SUPERIOR LONGITUDINAL SINUS; LATERAL SUTURE OF VEIN-WOUND.—DR. CHARLES T. PARKES, of Chicago, reports the following interesting case: B. B., æt. 27, laborer, was admitted to the Cook County Hospital, June 20th, at 4.50 P.M., suffering from a compound comminuted and depressed fracture of the skull. Patient has always enjoyed good health; no hereditary taint, nor venereal accidents. Has been a moderate drinker, but was not under the influence of liquor at the time of the accident.

While working on a building several bricks fell from the top of a wall, one of which struck him on the head, prostrating him, but not so that he lost consciousness. The hemorrhage was then quite profuse; a few rude attempts were made to control it until he was conveyed to the County Hospital.

On admission his general condition was fair; hemorrhage had nearly ceased, looked otherwise in good health.

On examination a lacerated wound of scalp was found about two inches in length, of general triangular form, over right parietal bone, above and posterior to the parietal eminence, extending to the median line; also a depressed fracture in same locality, one and a half inch in diameter, oval in form, was made out. There were sensations of numbness and loss of motion in both upper and lower extremity—left side. Dr. Parkes had the patient immediately anæsthetized, and after enlarging the external wound slightly, four fragments of the external table of the skull were removed. This operation was followed by such terrific hemorrhage that no further attempt was made to remove other fragments. The hemorrhage coming from the superior longitudinal sinus was controlled by packing the wound with gauze, and applying a compress. Several small vessels of the scalp were also twisted.

On June 21st, Dr. Parkes removed compress and gauze, and extracted three fragments of the internal table and one of the external table. Hemorrhage again occurred from a perforation in superior longitudinal sinus about size of a coffee-grain. This was closed by three catgut sutures, perfectly controlling the hemorrhage. Slight compress of gauze again applied; scalp wound partly closed by one silk ligature; the whole retained by bandage. The fragments taken from inner table of skull were four in number. The fragment from the external table was the fifth fragment from that table.

On July 20th the pulse and temperature were normal, the paralysis was gone, there was no pain, no inconvenience whatever; says he is all right; only slight loss of motion remaining in toes of left foot; dressed the head; from right and lower margin removed a piece of bone, which was found protruding and loose; from this time on several small pieces were removed, evidently fragments which had become necrotic on the edges.

On September 8th, there was no suppuration, motion and sensation had returned almost completely in the affected extremities, and the patient was discharged well and strong.—*Annals of Anat. and Surg.*, September, 1883.

ECTOPIA OF THE HEART.—PROF. TARNIER, at the meeting of the Académie de Médecine of July 31st, introduced to its notice a highly interesting case of ectopia of the heart. The subject of it is a woman at the end of her pregnancy with her second child, no inconvenience having attended her first delivery. The sternum is bifid at its lower portion, so that the heart lies just below the skin. The ventricles can be taken hold of by the hand, but in order to feel the pulsation of the auricles the fingers must be passed into the upper part of the sternal cleft. The patient is also the subject of an umbilical hernia, and the displaced heart seems to have some immediate relations with this hernia. It would be difficult to appreciate the exact relations of the displaced organ. Is the pericardium intact? Is the heart free in the abdominal cavity? It is absolutely impossible to pronounce an opinion on this point. All that can be affirmed is, that the diaphragm is perforated, and that it is through this perforation the heart has passed, and become placed under the skin, accompanied or not with its proper serous membrane. After the woman has been delivered at the Maternité, where she is at present, the phenomena will be investigated by MM. Marey and Franck.

Prof. Marey stated that he and M. Franck had already taken some tracings. "This is," he observed, "one of the most interesting of cases, for it will allow, I have no doubt, of our verifying on the human subject the results obtained by experiments made on the heart in animals, such as the synchronism of the ventricles, etc. In this way, and without insisting at present more on the subject, the exploration of the heart of this woman will allow of our exhibiting the illusion which has given rise to the theory of Beau for the explanation of the pulsations of the heart. Beau explained the beating of the heart by cardiac dilatation under the influence of the afflux of blood at the moment of the ventricular diastole. This opinion appeared logical, for it is rational to admit that the impulse is produced at the instant when the organ increases in volume, and not when it contracts upon itself. But this explanation, however logical it may appear, is not the true one, and if any doubt exists about it an examination of this patient must carry conviction. If, in place of looking at her heart, we seize hold of it with the fingers, we prove in the most distinct manner that it is not when the heart is largest that the impulse is produced, but really when it is hardest. If the Academy will appoint a committee in order to examine this woman in relation to cardiac physiology, and it does me the honor of placing me on it, we shall be able after her delivery to undertake a series of researches for the elucidation of these various points. Cases of this kind are, in fact, extremely rare in the adult, and I have only been informed of one which existed at Ribeauvillers, in Alsace." A committee, consisting of Professors Vulpian, Sappey, and Marey, was appointed.—*Med. Times and Gazette*, August 18, 1883.

DIAGNOSTIC VALUE OF UTERINE HEMORRHAGE AFTER THE MENOPAUSE.—During the course of a late clinical lecture on malignant disease of the cervix uteri, DR. T. GAILLARD THOMAS stated, as an axiom in gynecology, that if a woman who has normally ceased to menstruate begins to have uterine hemorrhage, always suspect carcinoma. Not infrequently you will see in the medical journals the reports of cases where women who have passed the change of life have begun to menstruate regularly again; but such accounts are altogether deceptive, and, if these cases could be followed out, it would be found, with scarcely a single exception, that the uterine flow was merely the indication of the presence of malignant disease. In other words, there is absolutely no such thing as a return of the menses when a woman has once reached the normal menopause. Not long since a patient of mine in the Woman's Hospital, who is sixty years of age, began to have a flowing from the uterus, and, as there was no indication of any external disease, I applied the curette to the endometrium and drew out some pulpy masses, which I sent to a well-known microscopist for examination. The report that I got from him was that the growth was not malignant in any respect, but was simply a form of polypus. I am perfectly sure, however, that the microscopist is wrong, and for this reason: in the uterus of a woman of sixty, polypi never develop. The organ at that age is completely atrophied. Sometimes in women who have passed the menopause you will find uterine tumors which have all the appearance of fibroids. They are not by any means fibroids, however, but sarcomata.—*New York Med. Journal*, September 1, 1883.

SYNOVITIS OF THE WRIST WITH RICE-LIKE BODIES.—Incision in these cases has come again into favor as one of the consequences of antiseptic surgery. MM. Verneuil, Nicaise, and Notta have communicated to the Société de Chirurgie several remarkable examples of its successful employment; and M. Lafosse has recently published a *thèse* in which the whole subject is reviewed. He concludes that medical means, such as blistering, revulsives, etc., have no effect in these cases. Compression by bandages steeped in alcohol or various stimulant liquids are sometimes useful, but they only act by repelling the riziform bodies into the neighboring tendinous sheaths. Injections of tincture of iodine give better results, but they are only applicable to unilocular cysts. Incision and drainage, which formerly were followed by severe accidents, such as purulent sinuses, phlegmon, and purulent infection, are now attended by the best results when performed under the strict antiseptic method. Cures by the first intention, although possible, are quite exceptional.—*Med. Times and Gazette*, Aug. 18, 1883, from *Journ. de Thérap.*, July 25.

BILIARY ATROPHY AND HYPERTROPHIC CIRRHOSIS OF THE LIVER.—MAFFUCCI, convinced that, between hepatic sclerosis due to retention of bile and that due to simple inflammation of the biliary passages of the great and small interlobular branches, there are grave etiological and anatomical differences, undertook a series of experiments and anatomical observations, which bring him to the following conclusions: 1. Cirrhosis from biliary stasis has altogether a different origin and signification from hypertrophic cirrhosis with jaundice. 2. In cirrhosis from biliary stasis, clinical as well as experimental, a destruction of hepatic parenchyma precedes, which is repaired by new formation of connective tissue and biliary ducts, the epithelium of which starts from preëxisting tubes. 3. In hypertrophic cirrhosis the acini remain intact, their trabeculæ are transformed into true embryonic tubes, and the connective tissue accompanies and follows the different phases of the same hepatic parenchyma. 4. Very similar to hypertrophic cirrhosis is the experimental process obtained without retention of bile. 5. In cirrhosis from biliary stasis, as well as in hypertrophic cirrhosis, there is an angiocolitis; in the first it is owing to the retention of the bile; in the second it depends on various causes, all of which are not yet known. 6. In hypertrophic cirrhosis, the irritation of the hepatic parenchyma may arise from the large biliary ducts, as happens in experiments, or from causes that acts directly on the parenchyma, as in clinical cases. 7. It is not the new formation of con-

nective tissue which surrounds and invades the acini, nor the new formation of bile-ducts from those preceding, which constitutes the chief character of hypertrophic cirrhosis.—*London Med. Record*, August, 1883.

SALICYLATE OF SODA IN DIARRHŒA.—DR. CALLEZA terminates an article on the pathology of diarrhœas, their classification, and the use of salicylate of soda in fermentative diarrhœa, with the following conclusions:

1. The products of the putrefaction of the materials which pass through the digestive canal cause not only a great number of diarrhœal states evidently idiopathic, but also many cases of secondary diarrhœa, in which a preëxisting disease has engendered a disposition to putrefaction, which is developed under the least abnormal influences.

2. Salicylate of soda is the most efficacious agent for the prevention of putrefactive fermentation in the intestinal canal, without causing troubles of the normal metamorphosis of digestion. It should always be employed when there is a great fetor of the stools, especially if this characteristic has been noticed at the commencement of the trouble.

3. An amount varying from grs. xxx to xlv *per diem*, given in two or three doses, is sufficient to cause rapid cure of putrefactive diarrhœa, when it is idiopathic in the whole sense of the word.

4. In those cases which are really secondary (and they form a very small number), salicylate of soda may also be used with advantage.

5. In syphilitic and phthisical diarrhœas, and in those which accompany visceral abscesses—and especially abscesses of the liver—and dysentery, salicylate of soda has given the best results.—*L'Union Méd. du Canada*, July, 1883.

PAPILLOMA OF THE BLADDER.—A case is described by RAUSCHENBUSCH of a growth occurring in a man æt. 43, which was removed by operation. The patient had been suffering from bleeding from the urethra and cystitis for about a year, and when in the hospital he often passed bits of a villous tumor with his water, the dendritic character of which could be easily determined by floating them out in water. The tumor could be felt at the base of the bladder, by introducing the hand into the rectum whilst a catheter was in the bladder. Median lithotomy was performed, and the tumor, which was attached by a long stalk, was seized and twisted off, so as to avoid all danger of hemorrhage. Three or four weeks later the patient was free from all symptoms, and the wound healed. A year later there had been no return. The author draws attention to the fact that only seven cases of such operations are recorded, and in only five cases were they attended by success. It appears, too, that the favorite seat of these tumors is on the trigone, and near the orifices of the ureters, very rarely if ever at the top or sides of the bladder.—*Practitioner*, August, 1883.

TREATMENT OF VARICOCELE BY INTERVENOUS INJECTIONS OF ALCOHOL.—KRANZFELD describes (*Vrach. Vedom.*, No. 540, 1882) a simple and easy method of treating varicocele, which had been successfully practised in seven patients by Dr. G. T. Dukhnovsky, of the Odessa Military Hospital. The method consists in injections of 85 to 90 per cent. alcohol into the subcutaneous cellular tissue surrounding the spermatic veins. The needle of a Pravaz's syringe is introduced under the skin at any point facing the dilated veins, and is brought, with the help of the operator's left hand, as nearly as possible to the diseased vessels; then the syringe is slowly emptied. The injection causes only moderate burning pain, lasting from half an hour to three hours. On the next day after the operation there appears a considerable, but almost painless, swelling of the parts, which is at first soft, then becomes more tense. The injections are repeated at three or four days' intervals, from three to ten times, according to the demands of the case. Finally, the spermatic veins are transformed into thin hard cords. In all the seven patients of Dr. Dukhnovsky cure was complete (at least the patients remain quite well as yet). The same method proved equally efficacious in two cases of dilated veins of the leg.—*London Med. Record*, August, 1883.

CAPILLARY PULSE.—In normal physiological existence, the pulse-waves become so toned down by the elastic property of the arterial walls that no pulse can be said to exist in the capillaries. Under certain circumstances the pulse-wave is carried over to the capillary vessels and may be there demonstrated. Quincke published a paper on the subject in 1868 in the *Berliner klin. Wochenschrift*, No. 34. According to him, the capillary pulse, characterized by alternating pallor and redness of the tissues isochronous with the systole and diastole of the heart's action, is specially perceptible in the matrices beneath the nails. The phenomenon may be seen sometimes in the healthy body, in those suffering from anæmia, and especially in individuals the subjects of aortic regurgitation. Quincke further observed the capillary pulse in the capillaries of the fundus oculi of two patients under treatment for valvular insufficiency of the aorta. Writing in *La France Médicale*, No. 15, M. Albert Ruault has again drawn attention to the phenomenon. He recommends the production of a vaso-motor disturbance by drawing the finger-nail smartly across the skin of the forehead and studying any variations which may present themselves. A sensitive area, so to speak, is thus produced where the capillary pulse may be seen in those in whom it happens to exist. Ruault has observed the condition in various pathological states where the coexistence of excessive cardiac impulse and general arterial narrowing was noted.—*Lancet*, Aug. 18, 1883.

PRIMARY TUBERCULAR ARTHRITIS.—DR. F. ARNAUD, in a recent paper on this subject, in which he reports two cases, draws the following conclusions:

1. Tuberculosis of the synovial membranes is primary and independent of osseous lesions, or secondary (osteo-arthritis) and consecutive to the development of tubercles of the epiphyses.

2. Primitive tuberculization, with which we are now concerned, is manifested in the synovial membrane under the two anatomical forms of grayish granulations, and microscopic elementary tubercle. This elementary tubercle always accompanies the granulation, but it may exist alone, independent of any tubercular lesion visible to the eye.

3. Synovial tubercles have been found and studied in fungous tissue, but may be observed in the absence of any fungous alterations, and also in the fistulous tracts in the walls of periarticular abscesses, especially where the new growth has developed by a true inoculation.

4. The tuberculous nature of chronic arthritis may easily pass unperceived unless microscopic examination be made. It is important in all cases of arthritis, with or without osseous lesions, to make a complete anatomical and histological examination of the synovial membrane and of the periarticular tissues.

5. We believe that ultimate researches will demonstrate the tuberculous nature of a certain number of white tumors of the soft parts, of fungous or non-fungous chronic arthritis, hitherto attributed to scrofula, rheumatism, and unknown causes.—*Revue de Chirurgie*, July, 1883.

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SATURDAY, SEPTEMBER 8, 1883.

SANITARY SINS AT RYE BEACH.

THERE may be a question whether the sins of the moral life of man are atoned for here, or in the world to come. But as regards sanitary sins there can be no doubt: the punishment follows quickly on the commission of the offence. The offender is caught *in flagrante delictu*, and he cannot plead ignorance, or lack of intent, in stay of execution, but is summarily punished to the full extent of the law.

In the recent outbreak of fever at Rye Beach, New Hampshire, we have an illustration of this great truth as complete in all the details, as it is exempt from the usual fallacies. The great facts true of Rye, are equally true of many of the well-known resorts on the Atlantic coast. It is in the highest degree important to ascertain with precision the source and character of the sanitary evils which beset the summer visitor. Nothing less than the clearest and entirely unquestionable exposition of the sanitary evils of seaside and other resorts will suffice, for the proprietors of these places do not exercise their functions with strictly humanitarian considerations. The problem set themselves is, how to obtain the maximum of profit with the minimum of expenditure. Sanitary works are expensive and fruitless of profit. They can realize the duty of providing a proper water supply and suitable drainage, only when the occurrence of epidemics or filth maladies proclaim the unsanitary condition of their establishments, alarm the summer visitor, and stop the inflow of the "almighty dollar." Such a disaster threatens Rye and its annexes. The experience of the present season is ominous. A well-known citizen of Philadelphia — as all the world has been informed—fell a victim to a most obvious sanitary evil created on his own grounds, and others have sickened and died from the same causes at other places in Rye. At numerous other resorts along the Atlantic coast, similar conditions exist; at some of them every year the evil results are manifest, but gradually in all the preparations are making for future epidemics or for the occurrence of filth diseases in an endemic form. We cannot, therefore, be charged with a special animosity against Rye. This beautiful retreat happens for the moment to be an object of attention and solicitude, because of the sad experiences which have startled the public. Others await their turn.

Having had the opportunity for a personal study of the local conditions, and of the resulting diseases, we are able to offer to our readers exact observations, instead of vague impressions. The subject is naturally divisible into two topics: the etiological factors; the pathogeny and clinical history of the disease. We do not exaggerate in any small degree when we affirm that the developments at Rye afford a strong illumination of disputed etiological and pathological questions. Persons in good health going to Rye, drink water plainly polluted, and suffer from a peculiar and distinctive type of fever. Beside the present, there are past experiences of the same character. In all instances, there are peculiarly favorable conditions for ascertaining the cause and for tracing out the results. Every hour of the daily life, and every influence which can affect the individual, can be accounted for.

First, then, we purpose to examine the etiological factors. The summer boarding-houses grouped about Rye Beach, Little Boar's Head, and Hampton are either the houses, as originally built, of the farmers occupying this shore, enlarged to accommodate the guests, or they are newly constructed on the same plan, of the required size, with modifications imposed by the demands of summer visitors. There are also some cottages and a fine new hotel in the Queen Anne style. Some of the last-mentioned structures are provided with drainage into the ocean, just in front of the main building, but the most of them have only ordinary privies, without vaults, or at most only superficial pits. At the beautiful and artistic new cottage just erected, where the cases of fever were most numerous, the sanitary arrangements are entirely modern. The house excreta are discharged into a vault some twenty feet distant. The well furnishing the water supply and the vault are not more than twenty feet apart, and both are thirty feet in depth.

Soon after the use of the water began in June last, it was observed to have a peculiar odor and taste, and presently assumed a milky appearance.

The cases of illness soon began to occur. The peculiar character of the fever which had its origin in these conditions will be set forth in a subsequent issue. The water was immediately suspected, and indeed no fine chemical analysis was necessary to determine the fact of its contamination; the senses of all who approached a vessel containing it were assailed by the pronounced fecal odor. There are odors and odors. The smell emitted by the water of this well smacked of age, and was rather that of an old privy vault than recent feces. The careful investigation then made disclosed the following condition: When the vault had been thoroughly emptied and cleaned, and the house-drainage conducted by pipes into the ocean, the well was pumped out, and the source of contamination looked for. Then it was discovered that a fecal mixture, milky in appearance and consistence, and powerfully offensive, oozed up in quantity from the bottom of the well.

It seems hardly credible that such a material, and in such quantity, should pour into the water-well from a newly-built and very recently occupied vault. A little investigation disclosed a very unexpected source of contamination, which may be responsible for the evil in the present instance. The neighboring property to the cottage above referred to is within a distance of thirty feet, but the well of the former is supplied by a spring nearer the surface of the ground, and is twenty feet in depth. The whole drainage from this cottage is conducted to a manure heap under the stable, and lies on the surface of the ground. Occupied for eight years, the drainage from this cottage has been slowly percolating through the soil during this period, for an inspection of the surrounding vegetation showed that there had been no overflow from the dung-heap. In fact, all the liquid material had disappeared in the ground—in a direction, which seems to be now explained. In digging a new well to the depth of thirty feet, it is probable that communication has been made with a reservoir in which this foulness has been accumulating for several years. An examination of the water of the new well, made several weeks after the adjacent new cesspool had been carefully cleaned, showed that it had lost nothing of its offensive character. It would appear conclusive that the supply of fecal matter from the new and tightly built cesspool, was hardly adequate to keep up the water contamination, and that the real source of the mischief is to be found in the neighboring premises.

In this unfortunate example of bad sanitation, we have an illustration of some sanitary sins now being committed at Rye. Cottages, large boarding-houses, and summer hotels are supplied with water by superficial wells, and common privies and privy vaults exist alongside. That diffusion of such excrementitious matter into wells and tightly-closed cisterns will take place, is a physical fact capable of ready explanation by the laws of adhesion and diffusion, and is attested by the uniform experience of civilized communities. That drinking-water under such conditions may be poisoned, and yet present no evidence of contamination that may be recognized by the senses, is also a fact; but usually on proper examination the presence of nitrates—products of the oxidation of organic matter, and of the various excreta comprehended in the term sewage—can readily enough be ascertained. There is, however, to be drawn an important distinction between sewage itself and certain accidental constituents, as disease germs. Sewage is capable of slowly poisoning the solids and fluids of the body; but for the production of specific diseases, special germs are necessary, for we are not more able in pathology than in organized nature to admit the doctrine of spontaneous generation.

DANGERS OF CANNED FOOD.

ATTENTION is called to the paper by Dr. W. E. Magruder, printed in another part of this journal, giving an account of a case of well-marked lead-poisoning from the use of corn put up in tin cans, and suggesting that this cause of disease may be often overlooked if its possibility is not borne in mind.

When we consider the great extent of the business of canning food, and the large quantities of fruits, vegetables, and meats preserved in this manner which have been consumed all over the world, and especially in this country, during the last twenty-five years; and, on the other hand, remember that in all that time not more than half a dozen cases of disease supposed to be due to metallic poisoning from this source have been reported, it is evident that the danger of such an occurrence must be very small.

It is very fortunate that this is the case, for not only are the commercial interests involved extensive and important, but it touches the food supply of a large and increasing number of people, to whom the use of these canned provisions has become almost a necessity, instead of a luxury, as it was at first.

Several investigations have been made by chemists within the last few years as to the presence of metallic salts in the contents of tin cans, and from these it would seem that most canned fruits contain small amounts of tin. When tin is present in the proportion of half a grain to a pound of canned fruit it can be detected by the taste, but there is no evidence that this quantity of tin is injurious to health. In comparatively large quantities some

salts of tin are irritant poisons, but the effect of small quantities does not appear to be cumulative.

The experiments of Mr. Francis P. Hall, reported in the *American Chemical Journal* for March, 1883, showed that in the absence of air, as in sealed cans, vegetable acids have very little effect on tin, or on an alloy of lead and tin. When, however, such acids are placed in ordinary tin cans which are left open, the tinning is rapidly dissolved.

The principal danger of metallic poisoning from canned goods is due to lead. This may be derived either from the tin-plate or from the solder. There appears to be much variation in the amount of lead contained in tin-plate. Traces of lead sufficient to produce the color-test exist in almost all specimens, while the lower grades of roofing or terne-plate contain a quantity sufficient to make cans dangerous which are manufactured from them.

Mr. Hall did not find any cans made from such plate, but there is little doubt that such cans are in the market. It is to the interest of those engaged largely in the canning business to secure a good reputation for their goods, and it is probable that, as a rule, they use only cans made of a good quality of bright plate. The cans made of inferior plate would be more apt to be made for sale to farmers, etc., for domestic use. The danger of contamination from the lead contained in the solder depends upon the way in which the can is made. In a machine-made can by a good and careful workman, the amount of surface of solder exposed to the action of the contents of the can is very small, little more, in fact, than the area of the vent-hole, which must always be filled by solder. In a hand-made can by a careless workman, a square inch or more of solder surface may be present on the inside of the can. Drops of solder may also fall into the can in the process of sealing, and most of our readers must have seen such fragments of solder. If they have not, their cooks have.

It seems probable that time is an important element in the action of the contents of the can upon it, and that cans two or three years old will be much more apt to be eroded than those which have only been put up a few months. The suggestion of the editor of the *Sanitary Engineer*, that every can should bear the date of the year when it is put up, is therefore a good one.

Special investigation is needed to determine the cause of exceptional cases, such as that reported by Dr. Magruder, but it does not seem as if the explanation in this case would be difficult. A cheap can, made probably of terne-plate, the addition of tartaric acid to the contents—probably unskilled soldering—and a body specially susceptible to the effects of lead make up the factors in the case. The moral of it all, so far as our information extends at present, is included in the following:

1. In purchasing cans to do your own canning, do not take a cheap, dull-looking article.

2. When you add an acid it should be neutralized before the article is placed in the can.

3. When the inner surface of a can, or of its cover, is found, on opening, to be corroded or to present a crystalline structure, the contents of that can should be regarded as suspicious.

4. When a can is opened it should always be emptied at once, and not be set aside half-full.

5. In cases of obscure nervous affections look out for lead-poisoning, and bear in mind the use of canned food as a source of such poisoning.

SUDDEN DEATH FROM GOITRE.

IN *Langenbeck's Archiv f. klin. Chirurgie* (Bd. xxix. Heft 1), SEITZ has an interesting article on sudden death from paralysis of the vocal chords in goitre, which emphasizes the necessity for great watchfulness, and, if need be, of tracheotomy as a prophylactic measure, if there be even the slightest dyspnœa.

The case which he reports is most striking. A young woman of twenty sought his aid, merely with a view to improvement of her appearance. Later evidence, after death, showed that she had had some dyspnœa and cough, but so slight that she did not even name them. Noticing a somewhat altered voice in coughing, it occurred to him that the recurrent nerve might be affected, and he appointed a visit on the next Sunday for a careful laryngoscopic examination. As Seitz dramatically puts it, "der nächste war ein herrlicher Sonntag—das Fräulein eine Leiche!" At three in the morning following her first visit to him, she suddenly stood by her father's bed, pointed to her throat, and, without uttering a sound, fell dead at his feet! The autopsy showed absolutely nothing anywhere abnormal, save that the left recurrent nerve was larger than the right, and was flatter where it was gripped by the enlarged thyroid (which reached to the spine, and had burrowed between the trachea and œsophagus) than it was below.

Sudden death in goitre may follow from bursting of the cysts (if it be of the cystic variety) into either the trachea or the pharynx, by sudden enlargement of the gland, by apoplexy in the gland, by compression of the trachea, either directly by the enlarged gland or by muscular contraction of the overlying muscles of the neck, or finally either by spasm of the muscles which close the glottis or paralysis of the muscles which open it.

Rose emphatically denies the possibilities of sudden death from paralysis of the vocal chords without spasm of the opponent muscles, and it is at least a question whether, in the case of Seitz, the pressure

of the tumor was not enough to irritate rather than to paralyze, for it must be remembered that the filaments to both sets of muscles—the openers and the closers of the glottis—run in the recurrent.

Certain it is that spasm of the closers of the glottis may cause sudden death. We have twice seen it in tetanus, so that we should hereafter regard a single urgent attack of dyspnœa in this disease a sufficient reason for instant tracheotomy; and in whooping-cough it is a well-recognized, though rare, cause of sudden death, as well as in pure spasm of the glottis. As to paralysis of the glottis openers, we are disposed to agree with Seitz that that may also be a cause of sudden death. The dyspnœa that follows even paresis of these muscles is well known, and it is highly improbable that in all the cases of sudden death he quotes, in which the recurrent was involved either by incorporation with the tumor or by pressure from it, the lesion only went so far as to irritate, and not to paralyze. A similar mechanical action, blocking the respiratory passages by the air-current's striking loose and flabby nostrils, is related by Linhart. Chloroform was administered to a young girl with a narrow nose and thin nostrils; alarming asphyxia soon set in, and he found that it was due to the inspiratory currents forcing the flabby nostrils against the septum, thus completely closing the nares.

The results of experiments upon animals are conflicting, as Seitz points out, from differences in the anatomical distribution of the laryngeal nerves in the vagus and recurrent nerves; and in those cases in which the branches to the posterior arytenoid muscles are cut, dyspnœa, stridor, and asphyxia follow. Whatever view be adopted, urgent dyspnœa in goitre raises a question also as to the advisability of extirpation of the gland. If it be undertaken, not only must the danger of hemorrhage be encountered, but it may also be suspected that the recurrent nerves are involved either by pressure or direct incorporation with the tumor, or else that the dyspnœa is the result of pressure upon the trachea. The laryngoscope will here give us the greatest assistance.

Finally, there may be dyspnœa and sudden death with no possible assignable cause. Stahl reports a case of a girl, aged fifteen, who had had goitre since two years of age. Acute enlargement of the tumor produced dyspnœa, for which Langenbeck did tracheotomy. Momentary relief being followed by renewed dyspnœa, he carried a flexible catheter to the bifurcation at the trachea, but on the third day the patient died from exhaustion, and no possible explanation for the dyspnœa could be found.

In the same journal, Wölffler, of Vienna, has an elaborate study of the development and structure of the thyroid, which will well repay perusal.

NEW TESTS FOR SUGAR—DIAZOBENZOL-SULPHURIC ACID.

STILL another recent test for sugar is diazobenzol-sulphuric acid, suggested by Pentzold (*Centralbl. f. klin. Med.*, June 20). Five cubic centimetres of strongly alkalized urine, are treated with five cubic centimetres of a freshly prepared solution of this substance (1 to 60). Immediately the urine becomes yellow, and remains so if sugar be absent. But if sugar is present, a darker hue and diminished transparency at once appear, and in from three minutes to a quarter of an hour, the color passes over into a beautiful bluish-red, that of a concentrated solution of fuchsin. The froth, if present, is orange or reddish-brown in color, but upon shaking, the color passes over into the same red which the fluid also exhibits in thin layers. This bluish-red color of the froth, may be considered typical of glucose in diabetic urines. A scarlet-red reaction, on the other hand, indicates the presence of acetone. This passes over into blue-red if sugar is also present, but remains permanent if only acetone is present.

In the urine of two diabetics, from which he had considered that the sugar had been removed by the use of iodoform and bromide of arsenic, KORVELS (*ibid.*) claims to have proved its presence by this test, when Heller's (Moore's) and Trommer's tests furnished entirely negative results. He has obtained a like result, also, in the urine of a child with fracture of the base of the skull, where Heller's, Trommer's, Fehling's, and Mulder's tests were all negative. Quantitatively $\frac{3}{10}$ of one per cent. of sugar were found in the urine.

A similar reaction is furnished by burnt catechin in acid solution; also by urine strongly charged with acetone as well as glucose, although preceded, as above stated, by a brick-red to scarlet-red color. Solution of pure acetone, or urine to which acetone has been added, strikes only the scarlet-red reaction, while that of sugar is blue-red.

The inconvenience of freshly preparing the solution is obviated by adding to the alkalized urine as much of the acid in substance as will go on the point of a knife. The reaction follows, but not so quickly, so that for delicate testing it is better to follow Pentzold's directions.

The similarity of this reaction with that of the picric acid must strike any one familiar with both. The reaction is probably identical, as both the picric acid and the benzole compound are petroleum products; and it is now likely that more than one of this series may be used as sugar tests.

ARMY AND NAVY EXAMINING BOARDS.

WE every now and then hear of candidates passing fair professional examinations before the Government Medical Examining Boards, who are found de-

ficient in general culture, and an impression has got abroad that these Boards are prone to lay undue stress upon the general literary attainments of the candidates, which in turn has an unfortunate influence upon the course of studies they pursue preparatory to coming up for examination. We have recently heard of a case in point, in which a young man passed an excellent examination in ancient and modern languages, and the subjects of a liberal education, but who failed signally in his professional studies. That such a man has capacity is very evident, and he only requires to apply himself to become as well qualified in professional subjects as he is in those pertaining to a liberal education.

We suggest, therefore, that hereafter in the circular-letter which is furnished to candidates, some notice be taken of this circumstance, and candidates be duly notified that while a fair knowledge of ancient and modern languages, and of mathematics, physics, and other subjects of a good preliminary education is required, it must in no way be considered as a substitute for thorough professional training.

REVIEWS.

DR. JOHN BROWN'S SPARE HOURS.

RARELY have we enjoyed a book more than the third series of Dr. John Brown's *Spare Hours*. Its American title is a rather unhappy translation of the author's *Horæ Subsecivæ*, but the "pith and marrow" is just as good under one name as another. The general popularity of the first two volumes is such that *Rab and his Friends* is now an English classic, and few of our readers, we trust, are not friends of *Marjorie Fleming*, with her "Newgate calendar of all the criminals as ever was hung," or are ignorant of the *Mystery of Black and Tan*, or the splendid description of Chalmers, or the loving tribute to his father.

The present recent volume—and we must add the last we shall ever have from his accomplished pen, now, alas! laid aside for ever—contains mostly purely professional papers, and as such will interest us all as physicians.

Most of us would take exception to the genial doctor's conviction "that a mediciner should be as free to exercise his gifts as an architect or a mole-catcher," but all surely will be with him in his plea "for the cultivation and concentration of the unassisted senses. This phrase is the key-note, indeed, to most of the volume. We are apt, amidst our learning and our scientific observations, to forget that the ear, the eye, and the hand are after all the chief avenues of knowledge, and to neglect their finer cultivation in our eagerness to learn the mysteries of all our "scopes" and our reagents. We need the *experientia* as well as the *experimenta*. And it comes with peculiar force from one who is such an exuberant classical scholar that his Latin and his quotations from the older English classics overflow on almost every page.

The paper on Locke and Sydenham will especially well repay an attentive perusal. It places Locke, as an active practitioner of medicine—a fact not generally known—in his true relation to our profession; while his notice of Sydenham—the "Prince of English physicians," such that Boerhave, whenever he mentioned his name, was wont to take off his hat—gives us more of wit and wisdom, of learning and wise precept, than almost any similar sketch we have ever read.

Another quality that is noticeable throughout the book is Dr. Brown's genuine, unaffected piety. His religious nature, like Sydenham's, is always evident, but never obtrusive. It is more a motive than an emotion, and leads to action rather than to theory or mere contemplative enjoyment. His was preëminently a religious *life*, and his profession gave him many opportunities for its practical manifestation.

He has embalmed the memory of more than one "Gideon Gray" in his delightful pages as examples and incentives to modest, conscientious work in rural seclusion. His paper on Dr. Adams, of Banchory, may well put to shame many a man who has means and opportunities, and encourage "country doctors" to believe that in spite of the lack of both they may acquire a generous education. Beginning when a lad of fifteen with seventeen hours a day on Virgil and Horace, each of which he read six or seven times in succession, Adams next read almost every Greek work excepting those of the ecclesiastical writers. Settling in a secluded village, he spent his days in the arduous and useful life of a country surgeon, having the lives, the births, and the deaths of a wild outlying region on his hands. Yet while faithfully attending to such an exacting practice, fighting for a living, and educating a family, he contrived to become "the most learned of Scottish physicians," translated Paulus Ægineta and Hippocrates for the Sydenham Society, besides numerous classical papers, wrote a series of papers on the construction of the placenta, on uterine hemorrhage, on burns, lupus, dislocations, etc., and amused himself at breakfast by translating an ode of Horace into Greek verse!

But our readers must enjoy the book for themselves. It is replete with good-sense and much learning, dashed with not a little genuine humor, and not spoiled by the occasional Scotticisms amidst a charming English only rivalled by that of our own Holmes.

SOCIETY PROCEEDINGS.

AMERICAN DERMATOLOGICAL ASSOCIATION.

Seventh Annual Meeting, held at Sagamore House, Lake George, August 29, 30, and 31.

(Specially reported for THE MEDICAL NEWS.)

WEDNESDAY, AUGUST 29TH, FIRST DAY.

MORNING SESSION.

THE meeting was called to order by the PRESIDENT, DR. R. W. TAYLOR, of New York, who made a few remarks and called for the reading of the papers.

DR. PIFFARD, of New York, read a paper on

THE TREATMENT OF ACNE.

Etiology is the main feature to be looked into. The chief physical factors in the production of the disease are already known. One of the commonest in women is disorder of the uterine functions. There are incurable cases of uterine disease accompanied by acne, in which the skin affection is incurable; it is no use attempting treatment. In acute acne, one of the best remedies for internal use is calx sulphurata in minute doses. Bromide of arsenic is also a valuable remedy in the dose of $\frac{1}{100}$ to $\frac{1}{50}$ grain, made into a one per cent. solution in alcohol; one to two minims may be administered in a wineglassful of water. If the stomach becomes upset, its use must be suspended. The sulphide of calcium is most useful in lymphatic subjects, while the bromide of arsenic is suited to acute cases. Locally, some cases do best under early puncture of the lesions followed by the employment of *warm* water, while in other cases simple applications of *hot*

water are most beneficial. Sometimes a weak belladonna ointment may be applied at night, or a stramonium ointment, the latter to be made from a fluid extract prepared from freshly gathered leaves.

In chronic acne, sulphide of calcium (calx sulphurata) is to be pushed, beginning with doses of $\frac{1}{30}$ grain and rising. Bichloride of mercury is sometimes of use internally, even where there is no possible suspicion of syphilis. Ergot, the use of which has been recently advocated by Dr. Denslow, of New York, the writer had found useful in practice, although he did not endorse Denslow's theory of its action. The proper dose he had not decided upon, but the drug is by no means a harmless one. Dr. Denslow used it in doses of 20 to 30 minims of the fluid extract. Ergot may also be used to advantage in acne indurata.

DR. ATKINSON, of Baltimore, said that he had never been able to obtain any benefit from the employment of sulphide of calcium.

DR. ALEXANDER, of New York, confirmed Dr. Atkinson's statement with regard to sulphide of calcium. As for ergot, he had found that of use in diminishing the redness of the skin, but not in removing the lesions. Other members concurred in these statements.

THE PRESIDENT, DR. TAYLOR, said that in the treatment of acute acne he was accustomed to rely upon the employment of diuretics, *e. g.*, Rochelle salts with acetate of potassium. In indurated acne he employs puncture, also touches the lesions with a solution of pernitrate of mercury together with the application of hot water. He had recently employed a solution of chrysarobin, thirty grains in an ounce of collodium, as suggested by Dr. Fox, of New York. This does not come off on the clothing, and although it necessitates sequestration during its employment, on account of the discoloration of the face, it gives a good result. Internally, he employs Donovan's solution, pushed to 10 or 12 minim doses. Ergot diminishes the hyperæmia, but does not cure the acne. Dilute ung. hydrarg. sometimes produces an excellent effect.

DR. STELWAGON, of Philadelphia, said that he had succeeded in getting excellent results from a wash of half a drachm each of sulphate of zinc and sulphuret of potassium dissolved in four ounces of water.

DR. GRAHAM, of Toronto, read a paper on

GENERAL EXFOLIATIVE DERMATITIS,

which he thought occurred more commonly than the literature of the subject would indicate. The writer went on to describe four cases which had come under his personal observation, and concluded by formulating the conclusion that two varieties of exfoliative dermatitis exist, which should be called (1) Dermatitis exfoliativa rubra. (2) Dermatitis bullosa et exfoliativa. The first would include pityriasis rubra and allied forms; the second pemphigus foliaceus.

DR. ATKINSON thought the term "general exfoliative dermatitis" a good one to describe the disease without involving theories as to its nature. Some cases are in all probability tropho-neuroses, while others are more like eczema.

DR. GEO. H. FOX, of New York, thought that many cases reported as general exfoliative dermatitis and pityriasis rubra are in reality eczema. He himself had seen but two cases of pityriasis rubra, one under the care of the late Dr. Tilbury Fox, in London, and another which he had reported some years ago in an early number of the *Archives of Dermatology*.

DR. P. A. MORROW, of New York, agreed with the speakers in regarding the affection under consideration a tropho-neurosis. He had obtained benefit in two cases from the use of arsenic.

DR. SHERWELL, of Brooklyn, thought that the designation employed by the writer, Dr. Graham, would not cover the disease pemphigus foliaceus as described by classical authorities in dermatology. He thought the latter a distinct affection which should preserve its distinctive name.

DR. PIFFARD also took ground against the conclusions of the writer, maintaining the individuality of pemphigus foliaceus, pityriasis rubra of Hebra, and general exfoliative dermatitis.

THE PRESIDENT, DR. TAYLOR, described two interesting cases of exfoliative dermatitis, the first occurring as a result of taking quinine in any form, the other in a patient the subject of venereal disease. The latter in its later and chronic stage resembled ichthyosis in its color and appearance.

DR. STELWAGON read a paper on

IMPETIGO CONTAGIOSA.

This affection, now admitted as a distinct disease by some German authors and attributed to tricophyton and to pediculosis by others, is scarcely, if at all, mentioned by French dermatologists. English and American authors have described it at various times and all admit its individuality with the exception of Hyde, who regards it as the offspring of vaccinia. The writer had had extensive experience in the study of the disease, and having examined above five hundred specimens, he had failed to find any fungus in the fluid of the vesicles and vesico-pustules such as had been described by Kaposi and Piffard. He had found micrococci in the vesico-pustules of impetigo contagiosa as he had in pustular eczema, but he had not found the so-called characteristic fungus except in a very few cases, and then only in the dried crusts. He considers impetigo contagiosa as an exanthematous auto-inoculable disease, naturally acute, but prolonged by auto-inoculation. The disease is: 1. A separate and distinct affection. 2. Not parasitic. 3. Not related in any way to vaccinia. 4. An acute systemic affection.

DR. HARDAWAY, of St. Louis, said he had always considered impetigo contagiosa an independent disease; the eruption is typical, and, more than all, it occurs epidemically. If the disease were related to ringworm, impetigo, or vaccinia, we should find it constantly occurring. In reality, it occurs in epidemics. He himself had not seen a case for five years, although his opportunities for observation had greatly increased in that time.

DR. ATKINSON said that he used to think he had a clear and definite idea of impetigo contagiosa. Of late, however, he had seen so many cases of impetiginous eczema occurring in summer-time and readily inoculable, that he felt much more in doubt in regard to the subject than formerly.

DR. ROHÉ, of Baltimore, agreed with the writer and speakers regarding the independent character of the disease. He had never succeeded in finding fungus. He did not believe with Hyde that the disease followed vaccinia.

DR. FOX said that Willan had many years ago described a pustular eruption which was not eczema and was not dependent upon the soil for its inoculation, which he described as "Porrigo." Later, Naylor described the same disease more fully under the same name. Dr. Tilbury Fox described the affection and its epidemic character at length, but unfortunately had given it a new name. The speaker doubted the correctness of Dr. Stelwagon's proposition that the disease is unconnected with vaccinia. He recalled the case of a surgeon who had contracted a typical impetigo contagiosa lesion on the end of his finger by slightly pricking it with a lancet recently used in vaccination. Although pediculosis might not produce impetigo contagiosa *de novo*, the speaker thought it might act in spreading it. The proposition as to the exanthematic

nature of the affection brought forward by the writer was new and important.

DR. PIFFARD thought that impetigo contagiosa could not be recognized in Willan's description. Naylor, however, had certainly described it, and he agreed with the last speaker in thinking it a pity that the name porrigo had not been retained. He had had several series of cases under observation, the first member of which in each group was an individual who had recently been vaccinated. While admitting the various points made by the writer, he was still inclined to hold to the fungus theory. He himself had found a peculiar fungus common to vaccinia and impetigo contagiosa, different from that of Kaposi, and unlike any other fungus. Until this should be found in various crusts of other eruptions, he should hold to the fungus view.

THE PRESIDENT, DR. TAYLOR, said that he was firm in his belief that impetigo contagiosa is a disease *sui generis*. He thought it was not a systemic trouble. One proof of this is that the disease always begins locally, as in the face. In sixty cases coming under his notice in a single epidemic, the affection began on the face or about the finger-nails in every instance, the patient afterwards inoculating himself on the body.

DR. STELWAGON said, in reply to Dr. Piffard, that, in five hundred microscopic examinations, he had only found the fungus described by Dr. Piffard five times, and that described by Kaposi ten times. It was in the crust only in every instance.

DR. HARDAWAY said that, in his experience, impetigo contagiosa was quite unconnected with vaccinia. Being public vaccinator in St. Louis, he had vaccinated many thousand persons, and he had never seen impetigo contagiosa result.

EVENING SESSION.

DR. ATKINSON, of Baltimore, read a paper entitled

A CASE OF MULTIPLE CACHECTIC ULCERATION,

Giving an account of a child two years of age, who after some unimportant preliminary symptoms showed signs of itching about the hands and face followed by vesiculation and ulceration. Later a large superficial ulcer appeared on the cheek, nearly covering it from the mouth to the ear. Other ulcers appeared in various parts of the body, and the patient suffered from diarrhœa with emaciation. The eruption was generally ushered in by itching, so that the child bit and scratched the part before the lesion appeared. This was particularly so in the case of one of the fingers, which ulcerated without any sloughing, the tissues seeming to melt away until the end of the finger was completely gone. In some lesions bloody blebs formed at first. Healing took place, finally, in this case with deep scarring. Ergotism, diabetes, and scurvy, could be excluded. The child was well lodged and fed. In recapitulation we have papulation and vesiculation followed by ulceration going through the skin, muscle, and even bone. There was no gangrene in mass, but rapid molecular disintegration. There was loss of power from debility, but no paralysis. Sensibility to pain was probably blunted. There was no symptom of vaso-motor disturbance. The case probably belonged to that class of affections called by the late Oscar Simon "multiple cachectic gangrene." Tonics are demanded in such cases. The prognosis is good, though deep scarring is caused by the disease.

DR. VAN HARLINGEN, of Philadelphia, mentioned a case of spontaneous gangrene of a probably reflex character, which had come under his notice, where patches at first resembling erythema multiforme had eventuated in deep sloughs. This affection occurred in a man who had recently suffered amputation of one of his limbs, and who died shortly after from septic poisoning.

THE PRESIDENT, DR. TAYLOR, mentioned two cases which he had seen, and which were similar in character to those described by the writer. One occurred in a cachectic infant, where a patch of molecular disintegration with red tumid edges and foul ichorous discharge formed on the back, extending over an area of two and a half by four inches, before healing took place, under general tonic and feeding treatment, with great scarring deformity. The second case was that of a nervous woman of thirty, married and childless, who had never taken ergot. Here bullæ formed on the tip of the nose, followed by deep ulceration and a highly deformed scar. At the same time, the fingers of both hands became blue and cyanosed; the pulps of the finger-tips withered in a sort of dry gangrene, finally leaving the attenuated cicatricial points with little more than the finger-nails, giving a griffin-like, claw-shaped appearance to the fingers.

DR. VAN HARLINGEN read a paper on

EXPERIMENTS IN THE USE OF NAPHTOL,

Describing this derivative from coal-tar, a mulberry-colored crystalline substance first introduced into medical practice by Kaposi, of Vienna, who extolled its virtues in various diseases of the skin. The writer agreed with him in regarding it as a remedy of high value in scabies, less so in psoriasis, and useless or harmful in eczema.

DR. FOX said he had used naphtol quite extensively, though not in all the diseases in which it had been recommended. His chief experience with it had been in eczema, where he had failed to get much benefit. In certain cases of eczema of the scrotum and anus, however, it had seemed to act favorably when other remedies failed, and in eczema of the scalp it had also acted pretty well.

DR. HARDAWAY, of St. Louis, had found naphtol of use in eczema squamosum and fissures of the fingers. In psoriasis he had found it inferior to other remedies.

The PRESIDENT, DR. TAYLOR, had employed naphtol in scabies occurring in private practice, with satisfaction.

DR. FOX read a paper entitled

A TRIP TO TRACADIE,

Giving an account of his experience at the leper settlement, where there are at present segregated twenty-four lepers, thirteen males and eleven females. Three cases did not seem to be those of leprosy. The patients are well taken care of, but do not receive medical treatment of any kind. The writer would not describe the cases at length, as the whole subject had been gone over by his fellow-member, Dr. Graham, who was preparing an official report for the Canadian government. He would, however, make some remarks on the general theory of the disease. The first impression given at Tracadie is that the disease is hereditary, as the lepers almost all bear a few family names in common. These, however, are found to be the family names of the entire community of Tracadie, where the inhabitants have intermarried for generations. The spread of leprosy in communities where we know about it is too rapid to permit the view that it can only be transmitted by hereditary influence. No physician or nurse attending lepers has ever been known to be attacked by the disease. The writer believed that leprosy is transmitted as syphilis is transmitted, by direct contagion. The ulcerative form is, of course, that which is most likely to be spread. He had observed one case in an old woman where the disease had run a certain course, destroying the fingers of both hands, and had then seemingly disappeared spontaneously. He was

hopeful of the future discovery of some means by which leprosy could be cured. Even now much has been done in some cases by the internal administration of large doses of nux vomica with inunctions and dressings of chaulmoogra oil.

DR. SIMMONS, formerly of Yokohama, who was present, spoke by invitation. He said that his experience, together with the general belief of the Japanese, was in favor of hereditary transmission. He believed that in many cases those accustomed to observing the disease could distinguish the signs of its approach in the countenance of the person long before any distinct objective symptoms made their appearance.

DR. SHERWELL read a paper entitled

PAGET'S DISEASE, OR MALIGNANT PAPILLARY DERMATITIS.

After calling attention to the fact that he had reported some years ago the first case of this affection, which had been published in this country, the writer went on to describe two cases which had come under his observation, and which had presented certain peculiarities different from those described by Paget as characteristic of the disease as observed by him. The writer's conclusions were as follows:

1. Malignant papillary dermatitis presents the subjective symptoms of burning and itching like ordinary eczema, but to a more marked degree, differing in this respect from carcinoma.

2. The objective symptoms, discharge, crusting, etc., are indistinguishable from those of eczema. The color is perhaps more lurid.

3. The "melting away" of the nipple would perhaps be better described as a gradual obliteration.

4. Retraction of the nipple, if this be present, is not to be distinguished from that observed in ordinary cancer.

5. The malignant papillary character is an important point, instantly resolving doubts as to the presence of the disease in question, or that of eczema.

6. In the cases observed by the writer, the duration of the disease was an important point. In one case it was over twelve years, while in the other it was considerably longer than the period assigned by Paget.

Adjourned.

THURSDAY, AUGUST 30TH.

MORNING SESSION.

DR. MORROW, of New York, read a paper entitled

THE PATHOGENESIS OF DRUG ERUPTIONS.

There appear to be two kinds of influences acting in the production of drug eruptions: 1. Constant and typical influences, such as those which give rise to the blebs of cantharides or the pustules of tartrate of antimony. 2. The far from constant influences which flow rather from morbid aptitude in the individual. The internal administration of certain drugs may in one individual produce one sort of eruption, in another a quite different rash, while a third will remain quite unaffected.

Among the theories which have been brought forward to account for the occurrence of drug eruptions, one regards these as the result of the irritation of the drug in passing through the skin, another to the injurious effect of the elimination in its struggle to get out, while a third looks upon these eruptions as the result of elective affinity on the part of certain drugs for certain glands. Behrend holds a peculiar theory of dynamic action, due to the production of a foreign material in the blood by chemical action on the part of the drug introduced into the blood-current. The theory held by the writer, however, was that of neurotic action.

DR. TAYLOR, of New York, read a paper on the

POLYMORPHOUS CHANGES OBSERVED IN THE TUBERCULAR SYPHILIDE.

A man of middle age contracted a chancre in April, 1881. No generalized eruption was observed until August, when he suffered from a papular eruption over the body, with mucous patches of the mouth. Under treatment, these lesions disappeared, and no medicine was taken for a year subsequently. In November last, a second rash of large papules came out over the whole body, but no medicine was taken until April of the present year, when the patient came under Dr. Taylor's observation. He then presented an eruption of scaly, psoriasis-like patches, symmetrically distributed over the whole body and scalp. The patient, who was somewhat emaciated, was put upon good diet, and placed under observation, without the administration of anti-syphilitic medication. The diagnosis would at first have been difficult, owing to the very strong resemblance which the lesions bore to those of psoriasis. Degenerative changes, however, soon manifested themselves. The patches gradually assumed a tubercular form, became hypertrophied, raised above the skin, and presented in some cases the appearance of the colloid lesions of lupus, the scaliness meanwhile decreasing greatly and disappearing. Later, bullæ appeared, chiefly on the scalp. This phase soon passed, and some of the lesions took on a rupia-like aspect, while others ulcerated, and others still simply hypertrophied, instead of breaking down. Certain lesions which hypertrophied, ulcerated in the centre, and became covered with thick, conical, rupia-like crusts, while around the edge the epidermis became markedly proliferated, causing these lesions to closely resemble those described and figured by McCall Anderson under the name of psoriasis rupioides. Gummatous ulceration also took place in this case in certain lesions. At the end of seven weeks, when the various manifestations were at their height, mercuric medication was instituted, and the disease disappeared in a short time.

The paper was accompanied by the exhibition of a number of very finely colored photographs, showing the appearance of the disease in its various stages.

DR. HARDAWAY said he had recently reported a case of psoriasis rupioides which agreed with McCall Anderson's description. Here the scales piled up so that the lesions presented the conical oyster-shell-like appearance, with a dirty aspect. On removing these crusts, the smooth, flat, moist, red surface of psoriasis presented its characteristic aspect.

DR. SHERWELL, of Brooklyn, read a paper on

PSEUDO-PSORIASIS OF THE PALM.

The writer expressed the belief that, when an eruption of frank psoriasis occurs upon the palm, there is probably a syphilitic taint. He gave a case of a man suffering with psoriasis in whom syphilis appeared. In the course of this, a scaly eruption appeared upon the palm, which was cured by mercurial treatment.

The discussion upon this paper was adjourned until after the reading of the two following papers:

DR. ALEXANDER, of New York, read a paper on

PSORIASIS OF THE PALM,

giving the history of four cases of unquestionable psoriasis of the palms in which no syphilitic taint existed. These cases were accompanied by photographs showing the exact appearance of the lesions.

DR. HYDE, of Chicago, who was prevented by sickness from being present, sent a paper entitled

A STUDY OF THE COINCIDENCE OF SYPHILITIC AND NON-SYPHILITIC AFFECTIONS OF THE SKIN,

which was read by Dr. Wigglesworth.

The writer spoke of the assertion which had been made, that syphilis may be mixed with other diatheses, especially in hereditary cases, so that affections which are part lupus and part syphilis, or part psoriasis and part syphilis, may be produced. He went on to give a description of various affections which are met with concomitantly with syphilis, of which the most important is psoriasis, and added a carefully detailed account of a case of psoriasis which had been for five years under his observation, at the end of which time syphilis supervened. The syphilitic eruption ran its course in the same localities as the psoriasis, the lesions being intermingled, but one being relieved by mercury, leaving the other to be afterwards cured by arsenic. The palms and soles were not invaded by either disease.

DR. GRAHAM, of Toronto, said that he had seen two undoubted cases of psoriasis of the palm where there was no syphilis.

DR. MORROW said he had until recently agreed with Dr. Sherwell in the belief that psoriasis does not occur in the palms. He had recently had evidence, however, that psoriasis could occur in the palms as a distinct affection, to be distinguished from the palmar syphiloderm.

THE PRESIDENT, DR. TAYLOR, said that Dr. Alexander's three cases had been seen by him, and the histories examined into with the utmost care, syphilis being certainly eliminated in each instance. In his experience with psoriasis of the hands, the nails are usually first affected. Usually psoriasis may exist for years on various parts of the body before the palms are attacked. He had observed psoriasis beginning about the nails, and then running up to the palms. The tendency seems to be to attack at first those parts of the body where the epidermis is thin and tender, and the palms, where it is thick and hard, only at a later period.

DR. SHERWELL said that in spite of the evidence brought forward for the opposite view, he was inclined to cling to his idea that palmar psoriasis was in fact syphilis. With regard to the elimination of syphilis by Dr. Taylor's careful examination in Dr. Alexander's cases, he thought it not so easy to prove the absence of syphilis. It is much easier to prove the presence of syphilis in any given case than its absence.

EVENING SESSION.

DR. R. W. TAYLOR, of New York, read a paper entitled

PECULIAR APPEARANCE OF THE INITIAL LESION OF SYPHILIS.

He had published some years ago, in the *American Journal of Dermatology and Syphilography*, a case in which he had been able to observe the initial lesion of syphilis from its earliest incipiency. A patient presented himself with a lesion which he had observed himself for the first time a few hours previously, and which was in the form of a minute silvery spot, situated within the meatus on a level with, and not in the least elevated above the surrounding mucous membrane, and showing no fissure or other alteration of the surface. Dr. Taylor had watched this lesion, examining it every day for a week, by which time induration had set in and over an area the size of a small pea; the epithelium then fell off, and the lesion began to take on the character of a typical chancre; the usual train of symptoms followed.

The second case was that of a patient who called the day following a suspicious connection. In this case the genital organs were examined daily. On the twelfth day, three silvery pin head spots such as might be made by touching the surface lightly with the tip of a crayon of nitrate of silver, appeared in close proximity upon the glans penis. On the fifteenth day, the lesion had attained a diameter of a line and resembled a papule of lichen planus; general symptoms followed in due course.

The point of interest in these two cases is the peculiar silvery appearance of the lesion, which may be recognized at so early a stage that contagion may be avoided. The appearance mentioned may last two weeks, and may then yield to the typical features of the chancre.

Two other appearances may be presented in the earliest period of the initial lesion of syphilis. 1. A minute, round, excoriated spot like an erosion, generally of a sombre-red color, and not usually the seat of hyperæmia. The further course of this lesion is characterized by enlargement in area and depth. This lesion is sometimes multiple. 2. The *papule sèche* of French writers, usually seen in cases of retracted or absent prepuce. It may run its course without change of character, or it may become indurated with parchment induration.

In children, said the writer, he had often observed the appearance of the initial lesion described above. In one case, an infant presented a pin-head-sized silvery spot on the tip of the tongue exactly as if a crayon of nitrate of silver had been touched to it. Absolutely no change of texture could at first be perceived, but the lesion rapidly indurated, eventually becoming a large mass.

A paper by DR. DUHRING, of Philadelphia, entitled

THE VALUE OF A LOTION OF SULPHIDE OF ZINC IN LUPUS ERYTHEMATOSUS,

was read by Dr. Stelwagon in the writer's unavoidable absence. The formula recommended by the writer was essentially as follows:

℞.—Zinci sulphat.,
Potasii sulphuret, . . . āā ℥ss.
Aquæ rosæ, ... ℥iijss.
Alcoholis, ... ℥iij.—M.

A few minims of glycerine may be added with advantage in some instances. The use of this wash should be preceded by that of soap to cleanse the surface from crusts, etc., when these are present. Castile soap is usually sufficient, but sometimes the spiritus saponis kalinus may be used in preference. The effect of the wash is cooling. Three cases were adduced to show the effect of the lotion in modifying the action of spreading lupus erythematosus.

DR. PIFFARD, of New York, said that what is wanted in lupus erythematosus is cauterization or scarification; nothing less, he thought, would really effect a cure.

DR. ATKINSON, of Baltimore, said that he had seen a case said to have been cured by internal treatment by phosphorus.

DR. VAN HARLINGEN, of Philadelphia, said that the treatment advocated by Dr. Piffard would be inappropriate in that condition of the disease in which the sulphide of zinc lotion is of benefit. In one of the cases described by Dr. Duhring, which had also come under his notice, there was a certain amount of infiltration and new deposit at certain points, which was of some duration, and superadded to this was an extensive and acute area, more erythematous in character, of recent occurrence. The effect of the lotion was almost magical in removing this erythematous portion. It might be necessary later to use stronger measures in the older portions of the disease. He would refer to the title of the paper which called attention to the value of the lotion in question as an agent in the management of lupus erythematosus. It does not claim to be a cure.

DR. WIGGLESWORTH, of Boston, said that lupus erythematosus is the opprobrium of dermatology. Last year he had travelled to Vienna chiefly for the purpose of inquiring if any more efficient treatment had been brought into use there, but had been disappointed in finding the old ineffective methods still employed. He had used chrysarobin, as suggested by Dr. Fox, in some cases with partial success, and would ask Dr. Fox what other treatment he could recommend.

DR. FOX, of New York, said, in answer to Dr. Wigglesworth, that the internal use of phosphorus with the external application of pure carbolic acid had recently been accompanied by success in his hands.

DR. STELWAGON, of Philadelphia, said that in one of the cases related by Dr. Duhring which had lately been under his care, carbolic acid had been used to no avail, while scarification had given rise to dermatitis without hindering the spread of the disease.

DR. PIFFARD said that dermatitis is just what is wanted. He had used Hardy's treatment of a strong ointment of biniodide of mercury, the object of which was to excite dermatitis.

DR. HARDAWAY, of St. Louis, suggested electrolysis.

DR. VAN HARLINGEN read a paper, by DR. DUHRING, of Philadelphia, entitled

A CASE OF AINHUM, WITH MICROSCOPIC EXAMINATION.

The case was one of a negro in West Virginia, brief notes being given together with the results of a careful microscopic examination of the specimen by Dr. Wile, of Philadelphia. The examination went to show strangulation of the member by a cord or other means intermittingly employed.

DR. SHERWELL, of Brooklyn, had inquired of patients from Turks' Island who, though not physicians, had observed cases of ainhum, and the testimony had been that the lazy negroes are those who are most apt to suffer from "ring-toe," and that the popular belief was that the deformity was produced from a desire to shirk work.

DR. HARDAWAY, of St. Louis, read a paper entitled

A PAPULAR DISEASE OF THE SKIN,

to which he regretted that he could not give a more exact designation. The patients were mostly children, in whom a chronic eruption occurred of dull, lemon-yellow, semi-transparent, pseudo-vesicular papules, of the average size of a small split pea, without areola, slightly itchy, and leaving no scar. Treatment seemed to have little effect, but in some cases spontaneous recovery took place. The eruption resembles the colloid disease of the skin described by Wagner and Besnier, but is a distinct affection.

DR. GRAHAM, of Toronto, presented, with photographs, a description of a

PECULIAR NEW GROWTH OF THE SKIN OF THE ARM,

occurring in a woman of forty, and resembling elephantiasis or lymphangioma, but of rapid growth, soft, and diminishing greatly in size when the forearm, from which it hung loose and bag-like, was raised. The growth resembled in some respects certain cases described by Dr. S. C. Busey, of Washington. The writer considered the case to be a dermatolytic outgrowth, with dilatation of the lymph-channels. He asked for advice as to treatment; the growth is increasing rapidly.

DR. ATKINSON, of Baltimore, thought he had seen a similar case; he was inclined to regard it as lymphangioma.

DR. PIFFARD suggested, in answer to the writer's inquiry regarding treatment, that electrolysis in successive operations should be employed.

FRIDAY, AUGUST 31ST, THIRD DAY.

A session was held for the exhibition of microscopic specimens, photographs, etc.

The following gentlemen were installed as

OFFICERS FOR THE ENSUING YEAR:

President.—Dr. Robert W. Taylor, of New York.
Vice-Presidents.—Dr. A. Van Harlingen, of Philadelphia, and Dr. J. E. Graham, of Toronto.
Secretary.—Dr. W. Alexander, of New York.
Treasurer.—Dr. George H. Rohé, of Baltimore.

The Association then adjourned, to meet at West Point, on the Wednesday nearest September 1, 1884.

CORRESPONDENCE.

COLORADO FOR CONSUMPTION.

THE following extract from a letter of a very intelligent gentleman who went to Colorado a few months ago on account of advanced tuberculosis, will be found to be of interest:

"I am located at present in a log-cabin at the forks of Eagle River and Brush Creek, in Eagle County, Colorado; elevation 6,400 feet, temperature, at present, between 70° and 80°, with rain about every ten days, and very cool nights. This is part of one of the ranges of the Rockies, and snow on the hilltops of the higher levels can be seen. The three-quarter mile wide stretch of level land running for many miles along the Eagle at this point, is abruptly bounded at the other side by great hills with pine growth, and back of them grassy hills and mountains, where the settlers that come here slowly, propose to "range" their cattle, when they get them. Everything is new here; the irrigating canals have not yet been dug, and the sage-brush, with its hordes of venomous mosquitoes and deer flies, grows everywhere except in the bottoms and cleared patches. I was advised by three different physicians of various localities of this State, that if I desired to get the full benefit of Colorado air, I should have to "rough" it on the mountains. After five weeks in Denver, with marked improvement, I started for Leadville, remained a few days, thence to Red Cliff (the end of the railroad), and thence thirty-four miles by wagon, over many mountains, to the present point, the roughest and most distressing ride one can conceive of. Climbing the mountain trail at high elevation taught me that my lungs were touched—adhesions at least; humanity comes to the relief of man and horse, and we stop to rest every thirty or forty yards. Camping out, though well chilled in my blankets, no evil followed. The nearest post-office is Dotsero, twelve miles away, with a stream to ford on horseback.

Life is of the primitive kind here, there is only a step from my cabin to the wigwam. We do our own cooking, etc.—no women for miles. We live on deer, elk, bear, fresh trout from the Eagle (my first weighed three pounds), and my ranchman host sends me with a shotgun for a rabbit for dinner; coffee, butter, etc., come from Leadville, where these and other articles are unusually high-priced. We sleep *in* blankets, a pair of double, with rubber and hay for mattress.

Dressing a piece of fresh meat, or a trout, hanging it up clean and free from impurities, the piercing sun that scorches my hands and face and lips, till I have to keep to the cabin till they heal, simply renders it drier and cleaner, it does not decay. The dead horse by the side of the trail shrinks up in his hide, and does not rot. Small wonder, then, that my bronchial trouble is also drying up. I am slowly but surely getting well without *treatment* or *medicine* of any kind. My sleep

is often unbroken, the great daily loss of phlegm is less than one-fourth, and returning strength and courage reconcile me to the great expense and loss to my little family, for I have been positively pulled up by the roots, and transplanted into a *terra incognita*. Looking on the grave with the utmost equanimity, a few months ago, I am now taking measures to dig a ten-foot hole, and secure a ten-and-a-third acre mineral claim at Carbonate, on a mountain twenty miles away, where prospectors are flocking from all sides on horse, mule, and burso, with scant outfit—the rifle and the frying-pan being the most apparent of the accoutrements. The croppings are the same as at Leadville. Many wonderful cures of persons far gone in lung disease, are noted in Denver. It is a bad place, though, on the whole, when heavy hemorrhages are coming from the weakened patient. The poor skeleton lady, for whom we all threw up our car windows one raw morning near Denver, died in a few days after; and I have seen many coffins put on the trains, of which the newspapers of that great and beautiful city say nothing."

NEWS ITEMS.

MONTREAL.

(*From our Special Correspondent.*)

THE LAVAL QUESTION.—DR. DESJARDINS has apparently been successful in his mission to Rome, on behalf of l'Ecole de Médicine et de Chirurgie. Bishop Fabre has received a telegram from Cardinal Simeoni directing that the school be allowed to open as usual. There is great rejoicing among the friends of the old school.

BERLIN.

(*From our Special Correspondent.*)

THE GERMAN CHOLERA COMMISSION.—In consequence of the cholera epidemic now prevalent in Egypt, the German Government has resolved to dispatch three members of the Imperial Board of Health for scientific researches on the spot.

According to this plan, which is much favored by the German Crown Prince, Privy Councillor R. Koch and Staff Surgeons Gaffky and Fisches will immediately depart for the land of the Pharoahs.

Their professional brethren in Germany, and I dare say in the whole civilized world, bid them a hearty farewell, and hope they will return from their dangerous task in full health and with rich earnings for our science and for the benefit of mankind.

It is impossible not to draw a parallel with the first similar German commission, executed by Messrs. Hirsch, Knessner and Sommerbrodt in consequence of an outbreak of the plague in southeastern Russia in 1878–79. The difference is obvious. On both sides the same ardent zeal, the same intrepidity and self-devotion, but *there* the last rays of a sort of "pen and ink" era, *here* the dawning morn of a modern practical and experimental epidemiology. May it become a bright day!

YELLOW FEVER AT PENSACOLA.—Since our last report there have been four new cases of yellow fever, and two deaths at the Pensacola Naval Station. There have been no cases in the town.

SHIP ISLAND QUARANTINE STATION.—Dr. Finney, in charge of the Ship Island Quarantine Station, states that there are now twelve vessels in quarantine there, from which nineteen cases of yellow fever were taken; all of these cases were brought from Vera Cruz. The Surgeon-General has also been informed that the American brig Hattie M. Bain, which left Havana for Boston, had a case of yellow fever on board. The vessel was disinfected at Havana.

YELLOW FEVER AT PANAMA.—During the month of July there were eleven deaths from yellow fever among the foreign population at Panama, and the deaths among the poorer classes of foreigners and natives, which are not made public, were more than twice that number. Great difficulty in experienced in obtaining the mortality reports, as it is clear that if they were made public it would be difficult for the Canal Company to obtain laborers, and it might enhance the cost of labor. The employés of the company are so reticent on the subject that it is presumed that they have orders not to give information.

YELLOW FEVER IN HAVANA.—There were twenty-nine deaths from yellow fever in Havana last week.

SMALLPOX IN NEW ORLEANS.—For the week ending August 25th there were twelve deaths from smallpox in New Orleans.

THE CHOLERA MORTALITY IN EGYPT.—The cholera epidemic may be now said to be practically at an end. An official report shows that there have been 27,318 deaths from cholera in Egypt since the outbreak of the epidemic.

There have been 140 deaths among the British troops stationed in Egypt.

INSECURITY OF THE HOSPITAL QUARANTINE BARGE SELDEN.—According to the *Maryland Medical Journal*, September 1, 1883, the Hospital Barge Selden, to which yellow fever patients are transferred on their arrival at the mouth of the Chesapeake, would seem to be very ill-suited for such purpose. The other day the Steamship Caribbean, bound from Kingston, Jamaica, to Baltimore, was detained thirty-six hours at the Quarantine Station, and complaint being made of this the Surgeon-General explained that the quarantine physician had found it necessary to go to Norfolk in order to procure workmen to repair the barge, "which was in a dangerous condition." Capt. Evans, also, the pilot, who was detained on board the barge for ten days on account of his having brought the infected Steamship Californian up the Bay, says that "the barge is in a most dangerous situation with undertow so strong that the stanchions of the lower deck were wrenched from their fastenings; that the roof let in the weather; that the connections of the watercasks were broken apart and all fresh water lost; that the craft is frail and may go to pieces at any moment; that it is surrounded by dangerous shoals and reefs, and is liable to be knocked to pieces by the first nor'easter that comes along; that the barge itself is an unsafe habitation even in good weather, and that patients cannot be safely conveyed to it." Granting that some portion of this picture is overdrawn there is still evidence enough to show that those who are so unfortunate as to be confined to the barge—both sick and well—are subjected to a most unwarrantable risk. Under no circumstances, even to secure the interior from the danger of the pestilence, is it justifiable to place the lives of those subjected to quarantine in peril.

AMERICAN GYNECOLOGICAL SOCIETY.—The Eighth Annual Meeting of the American Gynecological Society will be held in Philadelphia, at the Hall of the College of Physicians, on Tuesday, Wednesday, and Thursday, September 18th, 19th, and 20th. Papers are expected to be read as follows: *Superinvolution of the Uterus*, by Dr. Joseph Taber Johnson, of Wash-

ington; *The Importance of Cleanliness in Surgical Operations*, by Dr. R. Stansbury Sutton, of Pittsburg, Pa.; *Some Points Connected with the Subject of Dysmenorrhœa*, by Dr. C. D. Palmer, of Cincinnati; *An Unusual form of Abdominal Tumor—Three Cases*, by Dr. Thaddeus A. Reamy, of Cincinnati; *Is Extirpation of the Cancerous Uterus a Justifiable Operation?* by Dr. A. Reeves Jackson, of Chicago; *A Biographical Sketch of Dr. Nathan Smith, Founder of the Dartmouth Medical College* (being the President's address), by Dr. Gilman Kimball, of Lowell, Mass.; *The Management of Accidental Puncture and other Injuries of the Gravid Uterus as a Complication of Laparotomy*, by Dr. Charles Carroll Lee, of New York; *A New Method of Operating for Fistula in Ano*, by Dr. Edward W. Jenks, of Chicago; *Ergot; the Use and Abuse of this Dangerous Remedy*, by Dr. George J. Engelmann, of St. Louis; *Congenital Fissure of the Female Urethra, with Extrophy of the Bladder*, and *Menstruation after Extirpation of the Ovaries*, by Dr. Henry F. Campbell, of Augusta, Ga.; *Remarks on Chronic Abscess of the Pelvis*, by Dr. William H. Byford, of Chicago. A discussion on *Death after Labor* will be opened by Dr. Campbell.

AMERICAN PHARMACEUTICAL ASSOCIATION.—The thirty-first annual meeting of the American Pharmaceutical Association will be held at Washington, commencing next Tuesday, and continuing four days.

ARTIFICIAL LIMBS FOR SOLDIERS.—The Surgeon-General of the Army has just issued the following circular:

Congress having appropriated a small sum for furnishing special surgical appliances to those disabled in the military or naval service, the coöperation of surgeons is invited in order that this relief may reach the class of persons intended to be benefited.

This office is desirous of obtaining authentic information regarding all existing cases of severe and unusual injuries, and in reporting such, it will be found useful to bear in mind the following points:

1. As no money commutation is authorized, only such cases need be presented as offer a fair prospect of being relieved by surgical or mechanical appliances.

2. Artificial limbs and apparatus for disabled limbs being otherwise provided for, by law, the injuries here in view are almost exclusively those affecting the head, face, or trunk.

3. As trusses are furnished under special legislation, hernia, when not complicated with other injuries, is not to be understood as covered by this appropiation for *special* appliances.

4. As the appropriation is small, it is proper that it be expended only on the most meritorious cases. It is therefore not intended to furnish appliances which are ordinarily within the means of the individual, nor those that are of a character so perishable that it would be difficult to keep up the supply. Regard is to be had chiefly to the severity of the injury, and the ability of the sufferer, unassisted, to procure relief.

THE AMERICAN PRACTITIONER.—Dr. Theophilus Parvin, on account of his removal to Philadelphia, has retired from the editorial management of this journal, and has been succeeded by Dr. John A. Octerlony.

THE FIFTIETH DOCTORATE JUBILEE OF PROFESSOR BUDGE.—The fiftieth jubilee of PROF. DR. BUDGE has been recently celebrated in Greifswald. Prof. Budge was born in Wetzlar in 1811; moved to Bonn in 1842; was made Professor in the University of Bonn in 1847, and was called to his native place in 1855. Among the honors conferred upon him in view of his services to the profession and on the occasion of his jubilee are the Diploma of the Universities of Berlin, of Tübingen and Krakau, and the Medical Faculties of Marburg, Heidelberg, Königsberg, Brussels, Basle, Bern, Zürich, Leipsig, Erlanger, Strassburg, Breslau, Halle, Giessen and Göttingen, and the President of the Royal Leopold-Caroline Academy of Naturalists, prepared and sent congratulatory addresses, as did twenty young physicians who have recently studied in Greifswald. About 700 of his old pupils sent photographs, souvenirs, and congratulatory telegrams. In the evening, there was a grand torchlight procession, ending with "Gandeamus igitur" by hundreds of voices.

A CHAIR OF HOMŒOPATHY.—A homœopathic physician at Vienna has left a large sum of money for the establishment of a homœopathic chair in the Vienna University, but the Austrian Government has declined to accept it.—*Chicago Med. Journal*, Sept. 1883.

NEW MEDICAL JOURNAL.—We have just received the first number of *El Ensayo Medico*, published in Caracas, and edited by Drs. Dorateo de Armos, F. Monroy Gonzalez, and David Lobo.

HEALTH IN MICHIGAN.—Reports to the State Board of Health for the week ending August 25, 1883, indicate that intermittent fever, dysentery, pneumonia, puerperal fever, neuralgia, and rheumatism have increased, and bronchitis and inflammation of the brain have decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending August 25, and since, at sixteen places, scarlet fever at twelve places, and measles at five places.

OBITUARY RECORD.—On Sunday, September 2d, of paralysis, JAMES DOWLING TRASK, M.D., of Astoria, New York.

Dr. Trask was born in Beverly, Mass., in 1821. He graduated in arts at Amherst College in 1839, and received the degree of M.D. from the University of the City of New York in 1844. Subsequently the honorary degree of M.D. was conferred upon him by the Medical College of Buffalo, N. Y. He settled as a practitioner of medicine in Brooklyn, removed from there to White Plains, Westchester County, some years afterwards, and in 1859 he took up his residence in Astoria, L. I., where he practised his profession up to the time of his death. For some time past his health was poor, but he continued to attend to his professional duties until within a few days of his death. He was one of the founders of the American Gynecological Society, and was formerly Professor of Obstetrics and of the Diseases of Women and Children in the Long Island Hospital Medical College. His contributions to medical literature were of marked value, and his very valuable paper on *Placenta Prævia* received the prize of the American Medical Association, and was published in its *Transactions* for 1855. In 1843, he published, in THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, an elaborate paper on *Rupture of the Womb*, based on a study of over four hundred cases, which is still the best monograph we have on the subject. His last published paper was a very careful study of *Mushroom Poisoning* and appeared in THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES for April, 1883.

OFFICIAL LIST OF CHANGES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM AUGUST 27 TO SEPTEMBER 3, 1883.

WAKEMAN, W. J., *First Lieutenant and Assistant Surgeon.*—Assigned to temporary duty at Fort Sidney, Nebraska.—*Par. 2, S. O. 92, Department of the Platte, August 28*, 1883.